



COUNTERFORCE IN CONTEMPORARY U.S. NUCLEAR STRATEGY

BRAD ROBERTS, EDITOR

Center for Global Security Research
Lawrence Livermore National Laboratory
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*in memory of Dr. John R. Harvey, 1946-2024,
friend, colleague, and mentor*

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Introduction

Brad Roberts

An old debate about U.S. nuclear strategy has been given new life by the need to come to terms with growth in China's nuclear forces. This is the debate about whether to retain, reduce, or abandon a role for counterforce strikes in U.S. nuclear strategy. The renewed intensity of this debate is due primarily to the fact that retaining a significant role for counterforce will increase the requirements for U.S. nuclear forces beyond current levels and also beyond what the modernization program of record will deliver.

The original debate about counterforce versus countervalue targeting strategy dates to the early Cold War. U.S. leaders wrestled with the relative merits of counterforce (CF) and countervalue (CV) targeting during the 1950s and '60s as they critically evaluated existing operational plans and sought answers to questions such as: How best can we deter the Soviet Union? If nuclear war breaks out, how can we avoid the worst outcomes? In the end, contention over targeting concepts was papered over as the U.S. approach incorporated elements of both CF and CV. This remained the case throughout the post-Cold War period, during which there were few calls to revisit the basic approach to targeting. China's nuclear breakout has changed that, as the implications of continued emphasis on CF targeting become clearer.”¹

Thus the debate was relaunched in 2016 with the publication of an essay in *International Security* by Charles Glaser and Steve Fetter, which looked critically at the utility of counterforce in dealing with China's growing nuclear force.² Then in 2020 came *The Button*, a book by former Secretary of Defense William Perry and his coauthor Tom Collina. Though they made no reference to China (or Russian aggression against Ukraine), they strongly criticized long-standing nuclear strategy, arguing that it is “very, very dangerous” and calling for dramatic changes, including retirement of the ICBM leg of the Triad.³

In 2021, the debate was given a new boost by revelations about the sudden and unexpected growth in China's nuclear forces. Assessments focused on how to respond unavoidably confronted the question of whether to maintain a significant role for counterforce going forward.⁴ The bipartisan Strategic Posture Commission

1 For one map of this debate, see Keith B. Payne, “The Great Divide in U.S. Deterrence Thought,” *Strategic Studies Quarterly* (Summer 2020), pp. 16-48.

2 Charles L. Glaser and Steve Fetter, “Should the United States Reject MAD? Damage Limitation and U.S. Nuclear Strategy Toward China,” *International Security* 41, no. 1 (Summer 2016), pp. 49-98.

3 William J. Perry and Tom Z. Collina, *The Button: The New Nuclear Arms Race and Presidential Power from Truman to Trump* (Dallas, TX: BenBella Books), pp. 100, 219.

4 See for example *China's Emergence as a Second Nuclear Peer: Implications for U.S. Nuclear Deterrence*, Occasional Paper (Livermore, CA: Center for Global Security Research, Spring 2023).

took a clear position on this question, concluding in 2023 that existing U.S. strategy remains best suited to the new strategic environment—but requires quantitative and/or qualitative improvements to U.S. strategic forces.⁵ One result was a string of articles by scholars criticizing these judgments and making the case for a partial or complete rejection of counterforce, thereby avoiding a nuclear buildup in response to developments in China.⁶

Will this renewed debate persist? More importantly, will it begin to inform policy considerations? In our view, there is good reason to think that this debate will grow broader and deeper in the years ahead. Continued growth in China's nuclear forces will sharpen the U.S. discussion about whether and how to respond. The rising cost to the United States of modernizing the ICBM-leg of the Triad seems certain to invite a continuing challenge to the necessity of doing so. Moreover, the rising concern of many U.S. allies about the credibility of U.S. nuclear-backed security guarantees has begun to generate a discussion among them about their stake in a credible U.S. counterforce capability.

Precisely because there are important stability, geopolitical, and cost implications of the choices we face, it is imperative to have an informed, dispassionate debate. As James Acton has argued:

Reasonable people can reach different conclusions [about targeting policy]...We should argue about the legality and morality of different targeting policies as well as how they affect deterrence effectiveness and escalation risks. These issues raise questions that are objectively difficult to answer and would benefit from robust discussion.⁷

To help advance that more robust discussion, this volume has five main objectives. The first is to help bring some clarity to the concepts and definitions with which this debate is waged. In this debate, even experienced and well-informed people are often talking past one another. Most counterforce critics associate it with a strategy to put at risk by nuclear means the nuclear forces of an adversary. Thus, they are also critics of retaining the forces most useful for this purpose—ICBMs. Others associate it with the means, both nuclear and non-nuclear, to put at risk the military forces of an adversary. In a bid to reduce confusion, we first sought a common definition. That effort brought home to us the need for a more subtle approach to capture the meaningful differences among the multiple issues requiring analysis. Accordingly, contributors to this volume have been asked to be specific and consistent in their usage of the term.

⁵ *Report, Congressional Commission on the Strategic Posture of the United States* (October 2023).

⁶ These are cited separately in subsequent chapters and then in the conclusions.

⁷ James Acton, "Two Myths About Counterforce," *War on the Rocks* (November 6, 2023).

The second objective is to bring some missing voices into the discussion, such as those of policymakers, deterrence practitioners, and U.S. allies. The scholarly community alone cannot conduct the necessary “robust discussion.”

The third objective is to contribute to the effort to reorient the counterforce debate away from its Cold War origins and into the new geopolitical context. This follows from recognition of the ways in which Cold War experience still dominates the thinking of many. This is perhaps logical, as the new context is still taking shape around us. But more can and should be done to bring the debate into the present.

The fourth objective is to better understand the cases for and against counterforce in the new context. The case against counterforce is well set out in the existing literature. This volume was not conceived as a rebuttal to the counterforce critics. But it is a response. In some cases, authors are responding directly to some argument with which they agree or disagree; in others, they take an entirely different tack. But cumulatively, the essays included here offer sufficient content to enable us to assemble the case for counterforce in the current context.

The fifth and final objective is to better understand the reluctance of presidential administrations to take the steps advocated by counterforce critics. Glaser, Acton, and Fetter conclude their essay with the statement that “the prospects for significant change are poor.”⁸ Why might that be so?

The essays collected here were prepared in spring 2024. Very limited updates were made during the prolonged review and production process.

As editor, I am grateful to the contributors for their investment of time and energy in this project and to the many colleagues who reviewed and commented on earlier drafts. The views expressed in this volume are the personal views of the authors and should not be attributed to the Center for Global Security Research, Lawrence Livermore National Laboratory, or any of its sponsors, or to any institution with which an author is affiliated.

8 Charles L. Glaser, James M. Acton, and Steve Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia, Why America Doesn’t Need More Missiles,” *Foreign Affairs* (October 5, 2023), p. 24. <https://www.foreignaffairs.com/united-states/us-nuclear-arsenal-can-deter-both-china-and-russia>. Accessed July 23, 2024.

Setting the Record Straight

Talking Past One Another: Counterforce in the Policy Debate

Heather Williams

Definitions matter. The new strategic challenge of deterring two peer competitors has revived debates about the benefits and shortcomings of a “counterforce” targeting strategy.⁹ That debate reveals the fact that different people have different definitions of the term itself. Thus, their arguments and counterarguments tend not to connect. One result is a general confusion. Another is uncertainty: does “counterforce” actually refer to targets of value to political leaders, nuclear forces including command and control, or military and war-supporting industry? This definitional confusion is particularly important as the United States develops a strategy for deterring two peer competitors, and considerations of counterforce targeting will have implications for deterrence and arms control policies.

The majority of counterforce debates are talking past each other and reliant on different understandings of what is being targeted and the objectives of a counterforce strategy. One specific example of this was a January 2024 debate hosted by the Center for Strategic and International Studies Project on Nuclear Issues between Frank Miller and James Acton.¹⁰ In the debate, Miller’s remarks focused on a counterforce strategy to deter nuclear use in the first place, whereas Acton’s remarks focused on both deterring nuclear use along with escalation management and warfighting, a scenario Miller rejected outright on the grounds that we have no idea what happens in a nuclear war. In essence, the debate was not about counterforce targeting, but rather two separate sets of remarks—one about deterrence, another about escalation management. Given the complexity of the subject, this disconnect is understandable. Nonetheless, it remains problematic and risks confusing policy discussions, which need to revisit core strategic concepts in the face of deterring two peer competitors. Understanding discrepancies in the definitions and reconciling some of these debates is a key first step to inform wider doctrinal, policy, and intellectual debates about counterforce.

This paper proceeds in three parts. First, it reviews three official definitions of counterforce targeting and finds confusion with regards to what would be used in counterforce targeting, what is being targeted, and the conditions in which the United States would employ counterforce targeting. Second, the paper conducts a similar

9 See, for example, Madelyn Creedon, Marshall Billingslea, and Rose Gottemoeller, “Strategic Posture Committee Report,” House Armed Services Committee (October 2023), <https://www.ida.org/-/media/feature/publications/A/Am/Americas%20Strategic%20Posture/Strategic-Posture-Commission-Report.pdf> (accessed June 28, 2024); Frank Miller, “PONI Live Debate: U.S. Nuclear Targeting” (January 25, 2024), <https://www.csis.org/analysis/poni-live-debate-us-nuclear-targeting> (accessed June 28, 2024).

10 Center for Strategic and International Studies (CSIS), “PONI Live Debate: U.S. Nuclear Targeting” (January 25, 2024). Transcript available at: <https://www.csis.org/analysis/poni-live-debate-us-nuclear-targeting>. Accessed June 28, 2024.

analysis of the definitions used by people working in think tanks and academe, and finds equal confusion about what is being targeted and for what purpose. These competing definitions reflect the reality that the label is a shorthand encompassing many different facets of the issue. The paper concludes with policy implications and a recommendation for how to use the term “counterforce.”

Official Definitions and Sources of Confusion

There are at least three official definitions of counterforce targeting. According to Joint Publication 1-02, counterforce is, “The employment of strategic air and missile forces in an effort to destroy, or render impotent, selected military capabilities of an enemy force under any of the circumstances by which hostilities may be initiated.”¹¹ The noticeable detail about this definition is that it specifies what type of forces will be used—strategic air and missile—for targeting an adversary’s military capabilities, but is relatively vague about what is being targeted and under what circumstances.

The Department of Defense Nuclear Matters Handbook defines counterforce as:

Counterforce targeting plans to destroy the military capabilities of an enemy force. Typical counterforce targets include bomber bases, ballistic missile submarine bases, intercontinental ballistic missiles (ICBM) silos, air-defense installations, command and control centers, and weapons of mass destruction storage facilities. Because these types of targets may be hardened, buried, masked, mobile, and defended, the forces required to implement this strategy need to be diverse, numerous, and accurate.¹²

Unlike the Joint Publication definition, this one is specific about what types of adversary capabilities could be targeted. With regards to identifying what forces will be used by the United States, it takes a broad approach due to potential hardening and defenses that will require an unspecified and diverse range of forces.

Finally, the declassified OPLAN8010-08 identifies four categories of counterforce targets: military forces, WMD infrastructure, military and national leadership, and war-supporting infrastructure.¹³ The OPLAN focuses on the need for flexibility in U.S. strategies and targets because of a growing “variety of adversaries,” whereby “Strategies for one adversary will not necessarily be appropriate for another adversary. As such this plan contains strategies to handle various challenges from

11 William E. Gortney, “Department of Defense Dictionary of Military and Associated Terms,” Department of Defense, (February 15, 2016), Joint Publication 1-02.

12 Deputy Assistant Secretary of Defense for Nuclear Matters, “Chapter 2: Nuclear Weapons Employment Policy, Planning and NC3,” *The Nuclear Matters Handbook* (2020), p. 2. https://www.acq.osd.mil/ncbdp/nm/NMHB2020rev/chapters/chapter2.html?zoom_highlight=counterforce. Accessed June 28, 2024.

13 James Acton, “Two Myths about Counterforce,” *War on the Rocks* (November 6, 2023).

each adversary.”¹⁴ The purpose of the OPLAN is not to provide definitions, unlike the Joint Publication or Nuclear Matters Handbook, but it is a frequent reference point in official and expert conversations about counterforce targeting.

There are important discrepancies in these definitions with regards to what will be used in counterforce targeting, what is being targeted, and when to employ counterforce targeting. The Joint Publication takes a relatively narrow definition of what capabilities the U.S. will use to target, specifying it will include kinetic strategic capabilities, whereas the Nuclear Matters Handbook is much broader in allowing for hardening and diversity of targets. The latter would seem more closely aligned with the OPLAN, which accounts for the need to tailor to more adversaries. Another difference between the definitions is with regards to what is being targeted. The Joint Publication refers to “selected military capabilities of an enemy force”, without specifying if this includes command and control or storage facilities, which are covered in the Nuclear Matters Handbook and OPLAN definitions. Additionally, the Joint Publication is the only definition to mention the conditions under which counterforce targeting will be used, “under any of the circumstances by which hostilities may be initiated.” This detail suggests that counterforce targeting will be used before the initiation of hostilities, but does not specify if it would still apply once a conflict has begun and if counterforce targeting would still apply in scenarios where strategic deterrence has failed.

Working Definitions and Sources of Confusion

Given the increase in counterforce debates in recent years, there have been numerous competing definitions in scholarship and policy discussions. I focus on three definitions here which differ in their understanding of what is being targeted and why. The first definition from Keith Payne, John Harvey, Frank Miller, and Rob Soofer argues that counterforce targeting should “hold at risk what opponents value most, particularly including their military capabilities and tools of power—and avoid intentionally targeting cities and population.”¹⁵ This is perhaps the broadest definition as it must be tailored to the adversary, as recommended in OPLAN8010, but emphasizes avoiding cities and populations. This definition might be thought as tailored counterforce targeting.

A second definition from James Acton relies on the four categories in OPLAN8010, but contrary to the above, makes the argument that counterforce targeting does target “other kinds of assets.”¹⁶ Acton asserts that counterforce targeting can and

14 U.S. Strategic Command, “Strategic Deterrence and Force Employment (USSTRATCOM OPLAN 8010-12),” National Security Archive (July 30, 2012), USSTRATCOM OPLAN 8010-12.

15 Keith B. Payne et al., “The Rejection of Intentional Population Targeting for ‘Tripolar’ Deterrence,” *National Institute for Public Policy*, no. 563 (September 26, 2023). https://nipp.org/information_series/keith-b-payne-john-r-harvey-franklin-c-miller-and-robert-soofer-the-rejection-of-intentional-population-targeting-for-tripolar-deterrence-no-563-september-26-2023/. Accessed June 28, 2024.

16 James Acton, “Two Myths about Counterforce,” *War on the Rocks* (November 6, 2023). <https://warontherocks.com/2023/11/two-myths-about-counterforce/>. Accessed June 28, 2024.

has targeted cities, “if commanders deemed the potential benefits to be sufficiently large.” The problem, therefore, is that the use of the term “counterforce” suggests a more sterile operation focused on military targets than would actually be the case in a strategy such as Payne, Harvey, Miller, and Soofer’s. Instead of relying on traditional definitions of “counterforce” or “countervalue,” Acton recommends a strategy targeting conventional military forces and war-supporting industry, removing nuclear targets so as to avoid targeting population centers.

Separately, Acton, along with Charles Glaser and Steve Fetter takes a narrower definition of counterforce as targeting an adversary’s “nuclear forces and their command-and-control infrastructure.”¹⁷ This definition is used specifically in the context of objecting to prospects for a buildup in U.S. nuclear forces in response to the rise of China and strategic implications of facing two peer competitors. Instead, the authors argue for a strategy “threatening to damage or totally destroy an adversary’s society and infrastructure” which could include a spectrum of options, ranging from “small attacks against isolated infrastructure targets that would result in limited civilian casualties to large attacks that would result in societal destruction.”

As a result of these definitional differences, however, many of the counterforce debates are talking past each other on three important issues. The first point of definitional confusion is in use of the terms “counterforce” and “countervalue.” It may be obvious to some that a “counterforce” strategy can include what an adversary values, but this could also, understandably, be a source of confusion in suggesting a strategy targeting what an adversary values is “countervalue.” For example, Payne et al describe their counterforce strategy in terms of holding at risk what is valued by authoritarian leaders, “namely, itself, its military power and political control capabilities, and its industrial ability to wage war.” This version of countervalue is different from the traditional use of the term as referring to targeting population centers and society, which, arguably, are of less value to authoritarian leaders.

This disconnect is not a new one. In a 2009 essay, for example, Thomas Schelling acknowledged, “We never had an agreed understanding of ‘flexible response’ or ‘no-cities’ and its relation to counterforce targeting.”¹⁸ As Acton notes, a counterforce targeting would not necessarily avoid cities.¹⁹ In an attempt to reconcile this false binary, Keir Lieber and Daryl Press advocate for a hybrid of counterforce and countervalue leaving the United States with its current counterforce capabilities to provide credible retaliatory options across a wide range of circumstances (e.g., an

17 Charles L. Glaser, James M. Acton, and Steve Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia,” *Foreign Affairs* (October 5, 2023). <https://www.foreignaffairs.com/united-states/us-nuclear-arsenal-can-deter-both-china-and-russia>. Accessed June 28, 2024.

18 Thomas Crombie Schelling, “A World without Nuclear Weapons?,” *Dædalus Journal of the American Academy of Arts & Sciences*, On the Global Nuclear Future, 1 (October 1, 2009), p. 127.

19 Acton, “Two Myths about Counterforce.”

adversary's limited nuclear attack), all the while avoiding the need to build additional counterforce capabilities each time China or Russia enhances its nuclear arsenal.”²⁰

A second case in which the counterforce debate has become muddled is whether it is a strategy targeting nuclear forces, conventional forces, or both. Many targeting strategies refer to “military forces” without distinguishing between conventional and nuclear.

A final point of confusion is about the objective of counterforce targeting. Targeting policy, particularly from the late 1970s onwards, focused on deterrence and avoiding escalation and nuclear use in the first place. The 1978 Nuclear Targeting Policy Review (NTPR), for example, stated the objective was to “deter the Soviet Union from using their military power not only by threatening damage to the Soviet Union but also by making Soviet military victory, as seen through Soviet eyes, as improbable as we can make it, independent of Soviet employment policy and any particular scenario.”²¹ Similarly, Reagan's National Security Decision Directive-13 focused on enhancing deterrence, “to remove any incentive for initiating attack.” Escalation management was a secondary concern. According to the NTPR, “it is not necessary that we have highest confidence that escalation control will work, or, still less that we can win the war. However, to lend credibility to a U.S. threat to escalate, we need employment options and supporting capabilities which the Soviets might perceive to be advantageous to us. Such options require greater flexibility and endurance than we now have in our nuclear posture.”²² Reagan's NSDD 13, along with Carter's Presidential Directive (PD)-59, supported capabilities to “wage war successfully,” but this was explicitly for the purposes of deterring the Soviet Union from fighting a nuclear war in the first place or believing it could achieve its military objectives.²³

This difference in objectives about targeting policy is perhaps the most important. For some, counterforce targeting is about preventing nuclear use in the first place, especially since “nobody knows how to fight a nuclear war.”²⁴ This approach most aligns with the Joint Publication and its focus on “circumstances by which hostilities may be initiated.” For others, counterforce targeting is meant to prevent escalation

20 Keir Lieber and Daryl G. Press, “U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity,” Atlantic Council, (May 1, 2023), p. 9. <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/us-strategy-and-force-posture-for-an-era-of-nuclear-tripolarity/>. Accessed June 28, 2024.

21 Leon Sloss, “Nuclear Targeting Policy Review (NTPR)” (November 28, 1978). <https://www.archives.gov/files/declassification/iscap/pdf/2011-064-doc39.pdf>. Accessed June 28, 2024.

22 Sloss.

23 Ronald Reagan, “National Security Decision. Directive Number 13 (NSDD 13)” (October 13, 1981), <https://nsarchive.gwu.edu/document/20309-national-security-archive-doc-24-national>. Accessed June 28, 2024. Jimmy Carter, “Nuclear Weapons Employment Policy (PD 59)” (July 25, 1980). https://www.jimmycarterlibrary.gov/sites/default/files/pdf_documents/assets/documents/directives/pd59.pdf. “National Security Decision Directive 13, ‘Nuclear Weapons Employment Policy,’ 13 October 1981, Top Secret,” National Security Archive (n.d.) <https://nsarchive.gwu.edu/document/20309-national-security-archive-doc-24-national>. Accessed June 28, 2024.

24 Miller, “PONI Live Debate.”

once a crisis has begun. And still for others, targeting policy should be one tool, among others, to facilitate a reduction in nuclear forces.

Contemporary Counterforce Debates and Policy Implications

Two policy questions are particularly important and yet difficult to engage without clearer definitions of counterforce. First is the question of how counterforce targeting will impact force sizing. On the one hand, a broad definitional approach, such as Payne et al., could lead to an increase in nuclear forces to hold at risk adversary nuclear forces, command and control, and leadership for deterrence purposes. On the other hand, a narrow approach focused just on strategic forces or, even more narrowly, on conventional military capabilities and industry, could lead to a reduction in force sizing requirements. Following release of the 2023 Strategic Posture Commission report, Glaser et al. expressed concern that “it would almost certainly lead to a three-way arms race” and instead, they argue, the United States does not need to increase its force to maintain “a survivable nuclear force,”²⁵ but rather can maintain a credible nuclear deterrent by targeting an adversary’s society and infrastructure.

The second debate is with regards to whether or not counterforce targeting should be governed by the law of armed conflict. The 2016 Department of Defense Law of War Manual stated, “The law of war governs the use of nuclear weapons, just as it governs the use of conventional weapons. For example, nuclear weapons must be directed against military objectives. In addition, attacks using nuclear weapons must not be conducted when the expected incidental harm to civilians is excessive compared to the military advantage expected to be gained.”²⁶ The specific points of concern are proportionality and discrimination.²⁷ International humanitarian law supports current U.S. targeting policy, because an adversary’s leadership and decision-making structures “constitute a relevant military advantage” and could lead an adversary to surrender.²⁸

But some experts argue that the Law of Armed Conflict (LOAC) should not apply to nuclear targeting. Acton, for example, suggested, “I do not believe that Law of Armed Conflict provides sound guidance for nuclear targeting (I agree with the argument there is a tension between preventing nuclear war and abiding by the Law of Armed Conflict, and that the former is a more important goal than the latter).” Similarly, Glaser et al.’s approach explicitly calls for the intentional targeting of a society and infrastructure,

25 Glaser, Acton, and Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia,” pp. 3–4.

26 Stephen W. Preston, *Law of War Manual*, Department of Defense, Office of General Counsel (June 12, 2015).

27 “The ‘principle of proportionality’ in the *jus in bello* context seeks to limit such collateral civilian harm and prohibits attacks in which, according to the Additional Protocol I, the ‘expected...incidental loss of civilian life, injury to civilians, damage to civilian objects, or a combination thereof ...would be excessive in relation to the concrete and direct military advantage anticipated.’ [Additional Protocol I, Article 51(5)(b)]. ‘This legal definition of proportionality thus differs significantly from the common use of the term, which often simply means a symmetrical, equal, or ‘tit-for-tat’ reaction.’ (Scott D. Sagan and Allen S. Weiner, “The Rule of Law and the Role of Strategy in U.S. Nuclear Doctrine,” *International Security* 45, no. 4 (April 20, 2021), p. 136.

28 See Scott D. Sagan and Allen S. Weiner, “The Rule of Law and the Role of Strategy in U.S. Nuclear Doctrine,” *International Security* 45, no. 4 (April 20, 2021), p. 148; see, also, Sagan and Weiner footnote 71.

which ostensibly would undermine the principle of discriminating between civilian and military targets.

Conclusion and Use of “Counterforce”

Based on this brief history of counterforce targeting assessment of current miscommunication in debates, I suggest a new approach to using the term “counterforce.” I recommend less reliance on the term and precise definitions when doing so. Uses of “counterforce” should be explicit about what is being used to target, what is being targeted, and the intended effects of the counterforce strategy (i.e., deterrence, escalation management, and force reductions, among others.). Clarification of these factors will help focus the important policy and strategy discussions about counterforce and avoid further talking past each other. A single definition of “counterforce” will never be universally (or even widely) accepted because different interpretations are indicative of the complexity of the subject. Experts and policymakers alike, therefore, should define what they mean by “counterforce” at the outset.

Drawing on both government documents and expert analysis, this paper has demonstrated that debates about “counterforce” targeting are often talking past each other. As demonstrated in the previous chapter, debates about nuclear targeting are not necessarily new. What is new about the definitional debates is the changing strategic environment and how targeting strategy should adapt to more adversaries, more uncertainty, and more technological changes. Other papers in this volume take forward the debate about how to design counterforce in the face of these new challenges. The starting point for these discussions, however, is establishing explicit, if not shared, definitions.

Counterforce and Countervalue in U.S. Nuclear Targeting: A Historical Review²⁹

Franklin C. Miller

Prologue: Why “Counterforce” is a Misleading and Unhelpful Term

The terms “counterforce” and “countervalue” have probably done more to confuse generations of scholars and journalists about the meaning and intent of U.S. nuclear deterrence policy than any other two words in the English language. To begin, “counterforce” is generally (if mistakenly) conceived as meaning “counter-nuclear.” In this sense, it conjures up nuclear warfighting scenarios and a policy based upon illusions that a nuclear war can be limited and won. In its early incarnations, however, “counterforce” meant “counter-military” and was applied to a broad spectrum of Soviet military forces and facilities (including but certainly not limited to nuclear forces); at the very outset, it meant destroying the Red Army’s ability to conduct war by destroying the essentials the army needed to continue its campaign. At the other end of the spectrum, “countervalue” is popularly believed to mean deliberately seeking to kill large numbers of civilians, a policy whose deterrent effect against tyrannical autocrats is questionable at best and which is in any event now deemed contrary to the Laws of War. During the Kennedy-Johnson administrations, then Secretary of Defense Robert McNamara popularized the warfighting versus city-busting schools as if they were real options and suggesting that the latter was more stabilizing than the former; he did so while concealing his knowledge that counterforce was the predominant characteristic of U.S. nuclear policy at the time because he sought to dampen Air Force ambitions to increase the bomber and ICBM forces. To further complicate all this, since the late 1970s, U.S. deterrence policy has sought to hold at risk those assets an enemy leader is said to “value most”—generally the leader himself or the collective leadership if there is one, the secret police and party structure which maintains the regime in place, the regime’s key military forces (nuclear as well as conventional), and its war-supporting industrial base; that real-world definition of “countervalue” has never been associated with the term, however.³⁰

What follows is a review of how the United States sought to use its nuclear arsenal to deter Soviet aggression beginning in the late 1940s. Its goal is to clarify all of the above. It also suggests why serious scholars should abandon both terms. As the history unfolds, there is one additional cautionary note to emphasize: that there are various levels of “policy.” At times, policy, in the form of “guidance,” is set forth at the most senior political levels of a U.S. administration, either by the president or the secretary

²⁹ All primary sources cited here have been declassified and can be found online as noted in the footnotes.

³⁰ Ashton Carter, *Managing Nuclear Operations* (Washington, DC: Brookings Institution Press, 1987); Franklin C. Miller, “Counterforce and Countervalue in U.S. Nuclear Targeting: A Historical Perspective,” *Counterforce in Contemporary U.S. Strategy*, Brad Roberts, ed. (Livermore, CA: Center for Global Security Research, 2024).

of defense. At other times, the guidance is promulgated by the Joint Chiefs of Staff. In either case, the actual approach to targeting was mandated until the mid-to-late 1980s by the operational commander, the head of the Air Force's Strategic Air Command. At times, the target plans have conformed to the intent set forth in higher level guidance; at other times they have not. And that further complicates the debate.

In the Beginning... Atomic Planning in the Truman Administration

As the uneasy U.S.-Soviet wartime alliance began to demonstrate signs in 1948 of deteriorating into a potentially hostile relationship, U.S. military leaders began to contemplate the possibility that Soviet dictator Joseph Stalin might seek to invade parts of Western Europe and that America would need to defend against the attack. National policy only provided very broad guidance to the war planners. NSC20/4, dated November 23, 1948 stated:

In the event of war with the USSR we should endeavor by successful military and other operations to create conditions which would permit satisfactory accomplishment of U.S. objectives without a predetermined requirement for unconditional surrender. War aims supplemental to our peace-time aims should include:

- a. Eliminating Soviet Russian domination in areas outside the borders of any Russian state allowed to exist after the war.
- b. Destroying the structure of relationships by, which the leaders of the All-Union Communist Party have been able to exert moral and disciplinary authority over individual citizens, or groups of citizens, in countries not under communist control.
- c. Assuring that any regime or regimes which may exist on traditional Russian territory in the aftermath of war:
 - (1) Do not have sufficient military power to wage aggressive war.
 - (2) Impose nothing resembling the present iron curtain over contacts with the outside world.
- d. In addition, if any bolshevik regime is left in any part of the Soviet Union, insuring that it does not control enough of the military-industrial potential of the Soviet Union to enable it to wage war on comparable terms with any other regime or regimes which may exist on traditional Russian territory.³¹

31 Office of the Historian, U.S. Department of State, Foreign Relations of the United States (1948).

NSC 30 (dated September 10, 1948) was slightly more specific regarding the role of U.S. atomic weapons:

The type and character of targets against which atomic weapons might be used is primarily a function of military selection in the preparation of grand strategy. In this case, however, there is the additional requirement for blending a political with military responsibility in order to assure that the conduct of the war, to the maximum extent practicable, advances the fundamental and lasting aims of U.S. policy.³²

(Importantly, however, NSC 30 also stated that the decision to use nuclear weapons belonged to the president, establishing a policy which exists to the present day.)

It therefore fell exclusively to the U.S. military to devise a war plan to defeat Soviet aggression. The prevailing, although not universally shared, view in the Pentagon was that the Allies had defeated the Axis powers largely as the result of the “strategic bombing campaigns” against Germany and Japan which had destroyed the military production bases of both enemies. Accordingly, American planners sought to identify those key elements of the Soviet war machine whose destruction would bring a halt to the feared aggression. Air Force war planners identified the destruction of the Soviet transportation system as the key to disrupting Soviet aggression against the West, but the vast size of that system and the limited stockpile of atomic bombs and bombers capable of delivering them rendered such an attack infeasible.^{33,34}

Destroying the Soviet electrical grid was also considered but was rejected for the same reason. As a result, they focused on destroying the petroleum industry (the principal elements of which were located in or near urban areas). That policy objective notwithstanding, the historical record reveals that the Strategic Air Command (SAC), the unit tasked with carrying out the war plan, chose its aimpoints “with the primary objective of the annihilation of population, with industrial targets incidental.”³⁵

The initial plan called for the use of 34 atomic bombs on 24 cities; as the U.S. atomic bomb stockpile grew, that number rose to 50 bombs on 20 cities and 133 weapons on 70 cities. In 1949, the Joint Chiefs commissioned an ad hoc review, chaired by Air Force Lt Gen H.R. Harmon, of the then-current plan’s effectiveness. Harmon’s team concluded that although the attack would severely damage the Soviet petroleum industry, reduce its industrial capacity by 30-40%, and diminish Soviet

³² Ibid.

³³ This discussion draws heavily from the pioneering work performed by David Alan Rosenberg, principally from his monographs “The Origins of Overkill,” *International Security* (Spring 1983) and “American Atomic Strategy and the H-Bomb Decision,” *Journal of American History* (January 1979).

³⁴ Importantly, this planning effort focused on what damage the United States Air Force could create rather than on what kinds of attacks did the Soviet leaders fear most? In today’s terminology, it was a “capabilities plan” and not a “requirements plan.”

³⁵ Rosenberg, *International Security*, p. 15, citing Air Force historical documents.

ability to exploit any initial advances the Red Army might have made, it “would not, per se, bring about capitulation, destroy the roots of Communism, or critically weaken the power of the Soviet leadership to dominate the people.”³⁶ Interestingly, the report also concluded that “Atomic bombing will produce certain psychological and retaliatory reactions detrimental to the achievement of allied war objectives....”³⁷

Based in part on the Harmon report’s recommendations and in part on global events, by August 1950 the JCS had developed a new set of targeting goals in Russia for Strategic Air Command. The first, and highest, priority was destroying Russia’s atomic weapons capability; the second priority was to blunt the Red Army’s advance into NATO Europe; and the third was to attack the Soviet war-supporting industry. Nevertheless, on the assertion that targets in the first category were hard to find—and that tactical targets were fleeting—the majority of SAC’s weapons were allocated against fuel, electrical power, and atomic energy targets.³⁸ As the number of atomic weapons grew to support the strategic war plan, the U.S. Navy’s leadership began to raise concerns, internally at first and then more broadly in the Pentagon, about the overall thrust of U.S. planning. The Navy viewed the focus on the “atomic air offensive” as shifting the nature of war from military targets to civilian ones; the Navy argued for the return to the traditional focus of fighting the enemy’s forces, a viewpoint which while its philosophical underpinnings might have been laudable, also reflected concern that defense dollars were flowing much more to the Air Force than to the sea service. This, in turn, led to the so-called “Revolt of the Admirals” and in part to the resignation of the Chief of Naval Operations in 1949.

For the purposes of this chapter it is important to note several developments which occurred during the Truman administration:

- The planning for atomic war was delegated exclusively to the military
- The U.S. war plans against Russia struck war-supporting industrial facilities and urban (later referred to in this chapter as “urban-industrial”) targets in an effort to degrade Soviet military operations
- Efforts to expand the plans to include Soviet atomic forces and conventional military units were minimal due to poor target location data

U.S. nuclear war plans were created by the various Service commanders and were uncoordinated. Each of the nuclear-capable relevant Navy, Air Force, and Army regional commanders built their own nuclear war plans (with their own requirements) and did

36 The Harmon Report, found online in George Washington University/National Security Archive [henceforth cited as “GWU/NSA”], “Overkill, Assured Destruction and the Search for Nuclear Alternatives: US Nuclear Forces During the Cold War.”

37 *The Harmon Report*, op. cit.

38 Rosenberg, *International Security*, p. 17.

not coordinate or even deconflict these with each other (including with Strategic Air Command).

Eisenhower and the Creation of the SIOP and JSTPS

Eisenhower's eight years in office brought about significant changes in U.S. defense policy.³⁹ Because the president and his advisers believed Moscow's goal was to bankrupt the U.S. economy by forcing massive spending on defense, the administration opted to emphasize less costly nuclear forces of all ranges rather than spend major sums on building up a conventional force necessary to defeat the Red Army. More importantly for the "counterforce vs countervalue" debate, however, is the fact that the Navy-Air Force debate which first emerged in the late 1940s regarding nuclear targeting strategy re-emerged with increasing vigor in the Eisenhower years. The Navy, for both bureaucratic (more money spent on an ever-increasing nuclear arsenal meant less money devoted to the Navy) and policy (detering the USSR could be accomplished with a modest force holding industrial-economic targets at risk) grounds, opposed the Air Force's vision of reliance on a massive bomber and missile capability to destroy Russia's nuclear capabilities. In a then-classified speech delivered in 1957 to the Air Force Scientific Advisory Board, Strategic Air Command boss Curtis LeMay described the American atomic "strategic air offensive" as follows:

SAC has identified a list of targets which we call the "Air Power Battle System." This system includes the Soviet long range air armies..., their bases, their supporting POL and material resources, governmental and military control centers with their allied communication networks, and nuclear weapon stockpile and production facilities....I anticipate a substantial increase in the number of DGZ's during the next five years....⁴⁰

CNO Arleigh Burke vigorously protested this approach both within the Pentagon to his fellow Chiefs, to the Secretaries of the Navy and Defense, and to the President. Burke disagreed with LeMay, noting that "a United States strategy based on destroying the enemy's retaliatory capability would require preventive war.... Theoretically there is no limit to the number of enemy targets, either false or real.... Thus this doctrine would force us into a spiraling arms race...."⁴¹

39 The internal policy debate on nuclear deterrence and targeting policy within the Eisenhower Pentagon, and indeed between the Pentagon and the White House, was extraordinarily rich. This brief overview only touches the tip of that debate. Readers interested in exploring this more in depth should go to the George Washington University National Security Archives sections entitled "Overkill, Assured Destruction and the Search for Nuclear Alternatives: US Nuclear Forces During the Cold War" and "How Much Is Enough?: The U.S. Navy and 'Finite Deterrence.'"

40 Gen Curtis LeMay, remarks, "The Operational Side of Air Offense" (May 21, 1957), as posted online in GWU/NSA, "Overkill, Assured Destruction, etc."

41 Adm. Arleigh Burke, "Memorandum for All Flag Officers" (March 4, 1959) as posted online by GWU/NSA, "How Much Is Enough?: The US Navy and 'Finite Deterrence.'"

Burke's alternative view, which was characterized as "Finite Deterrence," argued:

We believe it is not necessary to have the capability to inflict multimegaton destruction on hundreds of major Soviet military targets and on countless other military targets....The concept of destroying enemy capability to attack in a large scale nuclear exchange has progressively lost effectiveness... Our objectives can be assured by the selection of a target system which will include the most vulnerable and essential elements in Soviet life, that is the control structure of the government and the Communist Party and the industrial complex which is the foundation of their national power....The objective is not the people—it is the control structure and industrial complex operated by them. These elements..[are a] relatively small number of targets.⁴²

President Eisenhower was receptive to this element of the Navy approach. Minutes of a 1958 National Security Council meeting reveal the following:

For 1958 the President directed that the [next study] concern itself with the retaliatory objective of immediately paralyzing the Russian nation rather than concentrating on targets of a military character although not entirely ruling out particular military targets which the Subcommittee believed would significantly contribute to paralysis of the Russian nation." ... [the discussion had noted that] the U.S. had as targets every city in the USSR with a population of over 25,000. In view of this very large number of urban targets the President believed we must get back to the formulation of the series of targets in the Soviet Union destruction of which would paralyze the Russian nation.....the President said he could remember well when the military ...believed that destruction of 70 targets would be sufficient. Now, however, a great many more targets had been added....One could not go on to argue we needed a 100 percent pulverization of the Soviet Union. There was obviously a limit – a human limit – to the devastation which human beings could endure.⁴³

The President concluded the meeting by calling for "an appraisal of the relative merits, from the standpoint of effective deterrence, of alternative retaliatory efforts directed toward: (1) primarily a military

⁴² Burke, op. cit.

⁴³ S. Everett Gleason, "Memorandum, Discussion of the 387th Meeting of the National Security Council, Thursday, November 20, 1958" (November 20, 1958), as posted online by GWU/NSA.

target system, or (2) an optimum mix of a combined military-urban industrial target system.”⁴⁴

The controversy continued to roil the Pentagon. In August 1959, Joint Chiefs Chairman (Air Force) General Nathan Twining, in a memo to Defense Secretary McElroy, after describing the SAC approach and the Navy counter, wrote:

We should continue to develop and keep up to date a target system for strategic attack which includes:

- (1) The critical components of Soviet long-range nuclear delivery capability
- (2) Governmental and military control centers
- (3) War-sustaining resources
- (4) Population centers⁴⁵

In February 1960, the Joint Chiefs responded to the president's call for an appraisal by recommending an “optimum mix” targeting approach. President Eisenhower approved that at a February 1960 NSC meeting.⁴⁶ In April, the Joint Staff prepared a National Strategic Targeting Policy (later re-named National Strategic Targeting and Attack Policy or NSTAP) which was based on the “optimum mix” approach. A critical element of this decision process was that NSTAP became the basis for a single, integrated, strategic target plan and a new joint service team, the Joint Strategic Target Planning Staff (JSTPS), was established in Omaha under the direction of the Commander of the SAC to produce and maintain the integrated strategic nuclear plan. This was the birth of the Strategic Integrated Operational Plan, or SIOP. The regional commanders, however, continued to plan their own local strike options on a largely independent basis.

McNamara and Assured Destruction

The Kennedy administration inherited a large (and growing per LeMay's prediction and Burke's fears) SIOP in January 1961. Consistent with academic and think tank criticisms of the plan for its lack of options, the administration turned quickly to breaking it up into multiple options which could be executed either in cascading fashion or (as in the Eisenhower years) all at once.

The creation of strategic options was one of McNamara's three major initiatives in nuclear policy, the other two being 1) a drive to increase the capability of U.S. and allied conventional forces in order to raise the nuclear threshold and 2) fighting the Air

⁴⁴ Ibid.

⁴⁵ Gen. Nathan Twining, Chairman JCS memo to Secretary of Defense Neil McElroy “Target Coordination and Associated Problems,” posted online by GWU/NSA, “Finite Deterrence,” *op. cit.*

⁴⁶ EEOB Minute (Feb 17, 1960).

Force's desire to field 10,000 Minuteman ICBMs. In September 1961, the Secretary wrote to President Kennedy stating the following:

The forces I am recommending have been chosen to provide the United States with the capability, in the event of a Soviet nuclear attack, first, to strike back against Soviet bomber bases, missile sites, and other installations associated with long-range nuclear forces, in order to reduce Soviet power and limit the damage that can be done to us by vulnerable Soviet follow-on forces, while second, holding in protected reserve forces capable of destroying the Soviet urban society, if necessary....With the recommended forces, I am confident that we will be able at all times, to deny the Soviet Union the prospect of either a military victory or of knocking out the U.S. retaliatory force.⁴⁷

...the 200 urban-industrial targets and the 150 bomber bases have the highest priority in the sense of required degree of assurance we can destroy them. The capability to destroy the urban-industrial targets is our power to deter attacks on our own cities.⁴⁸

By December 1964, McNamara had elevated the task of destroying Soviet urban-industrial targets to be his highest priority. Writing to President Johnson, he stated:

It is generally agreed that a vital first objective, to be met in full by our strategic nuclear forces, is the capability for assured destruction. Such a capability would, with a high degree of confidence, ensure that we could deter under all foreseeable conditions, a calculated deliberate nuclear attack on the United States. ...it seems reasonable to assume that the destruction of, say, 25% of [the USSR's] population (55 million people) and more than two-thirds of its industrial capacity would mean the destruction of the Soviet Union as a national society. Such a level of destruction would certainly represent intolerable punishment to any industrialized nation and this should serve as an effective deterrent.⁴⁹

47 Memorandum to President Kennedy from Secretary of Defense McNamara, "Recommended Long Range Nuclear Delivery Forces 1963-1967, (September 23, 1961), p. 4, as found in GWU/NSA "Overkill, etc."

48 Ibid., p. 6.

49 Memorandum for the President [Lyndon Johnson], from McNamara, "Recommended FY 1966-1970 Programs for Strategic Offensive Forces, Continental Air and Missile Defense Forces, and Civil Defense," p. 4, as found in GWU/NSA "How Much is Enough, etc."

He went on to stipulate that “once an assured destruction capability has been provided, any further increase in the strategic offensive forces must be justified on the basis of its contribution to limiting damage to ourselves.”⁵⁰

At the same time, however, it is clear that the Joint Chiefs and SAC did not share the Secretary’s priorities. Guidance for the preparation of SIOP-64, contained in JSCP-64, stated:

United States plans for nuclear offensive operations in the event of general war will be designed to achieve ... the objectives listed below

Destruction or neutralization of the military capabilities of the enemy, while retaining ready, effective, and controlled US strategic capabilities adequate to assure, to the maximum extent possible, retention of U.S. military superiority to the enemy, or any potential enemies, at any point during or after the war.

(b) Minimum damage to the U.S. and its allies, and in all events to limit such damage to a level consistent with national survival and independence.

(c) Bring the war to an end and on the most advantageous terms to the U.S. and its allies.⁵¹

The same Joint Staff prepared document also stated:

The primary concern should continue to be directed toward destroying or neutralizing the enemy’s military capabilities in order to minimize damage to the U.S. and our allies. The secondary concern should be to extend the attack to include the enemy’s urban/industrial system.⁵² (The study, using McNamara’s law of diminishing returns theory and noting that China at the time was a largely agrarian society, recommended placing a weapon on each of China’s 30 largest cities.)

The disagreement between secretary and his military chiefs thus continued despite 1) McNamara’s instructions to his staff that they were no longer to cite counterforce as the official nuclear strategy and 2) his order to the Chiefs to stop

50 Ibid., p. 4.

51 Enclosure A, p. 3 to Memorandum from General Maxwell Taylor, Chairman, JCS to General LeMay, General Wheeler, Admiral McDonald, and General Greene (June 5, 1964), Subject “Review of the SIOP Guidance, as found in GWU/NSA, “U.S. Nuclear War Plan Option Sought Destruction of Russia and China as “Viable Societies.”

52 Ibid., p. 9.

citing counterforce as the rationale for their weapons requirements.⁵³ McNamara was evidently driven more by his concern that emphasizing the counter military attack opened the door to additional demands (which he opposed) for ever-larger nuclear forces; nevertheless, he was quite cognizant of the fact that the major effort of the SIOP was directed at Soviet military forces. In a February 1966 NATO meeting he had the following colloquy with an allied Defence Minister:

[The Allied minister] asked if in SIOP options the first launch only covered military targets.

Secretary McNamara replied that this depended on the attack. Only in the event of an all-out Soviet attack would we make a total response. In the event the Soviets did not deliver an all-out attack, we would have the option of making a less than total response. Therefore we could use only a portion of our forces if the Soviets were to hit us with a limited first strike...

[The Allied minister] supposed that this was what we call a flexible response. Secretary McNamara agreed. Later in the colloquy, McNamara observed “[allies] should not underestimate the importance of the unlikely event [of a Soviet first strike] since this is the difference between destruction and partial survival. Our first priority is Assured Destruction. This we have achieved and will maintain. Frankly, we are over insured. We have three times the forces necessary to achieve Assured Destruction. However this 300 percent excess is fundamental to the survival of the west and it costs us several billions a year to maintain.”⁵⁴

Nixon-Ford and the Evolution of Deterrence Targeting

Both as an academic and a policy consultant to the U.S. government, Henry Kissinger had long been dissatisfied with the inflexibility of the SIOP, although he did not address the issue until Richard Nixon’s second term. In February 1973, he directed an interagency study [known as National Security Study Memorandum (NSSM) 169] to review U.S. nuclear war planning. The resulting study led 11 months later to Nixon’s promulgation of National Security Decision Memorandum (NSDM) 242, which was a landmark departure from previous nuclear policy documents. NSSM 169/NSDM 242 may be viewed as civilian officials’ first attempt to shape the war plan and to do so using the principles of deterrence. In doing so, it created the basis

⁵³ Fred Kaplan, *The Bomb* (New York, NY: Simon & Schuster, 2020), p. 84.

⁵⁴ Declassified segment of McNamara colloquy with a NATO counterpart in a “Nuclear Planning Working Group” meeting (February 17, 1966) (copy in author’s possession).

for a “requirements plan”—that is, a plan designed to hold at risk and destroy if necessary—what was believed Soviet leaders might view as essential post-war assets. This stood in sharp contrast to the previous 24 years of “capability plans” which were designed on the basis of what damage the military believed U.S. forces were capable of inflicting. As set forth in the opening paragraphs of NSDM 242: “The fundamental purpose of U.S. nuclear forces is to deter nuclear war, and plans for the employment of U.S. nuclear forces should support this mission.”⁵⁵ Should deterrence fail, NSDM 242 called for a “wide range of nuclear options” to “seek early termination on terms acceptable to the United States and its allies, at the lowest level of conflict feasible.”⁵⁶

Should general war result nevertheless, U.S. nuclear forces were to be employed for the “destruction of the political, economic and military resources critical to the enemy’s post-war power, influence.”⁵⁷

Under the guidance of Defense Secretary James Schlesinger, the secretary’s staff—for the first time ever—wrote a detailed directive as to how U.S. nuclear forces were to be used. This “Policy Guidance for the Employment of Nuclear Weapons” (known colloquially, as were its successor versions, within DOD as NUWEP) mandated the creation of counter military nuclear options limited in size and scope to “control escalation.” All of the escalation control options were to be designed to limit attacks in the vicinity of populated areas, and indeed the NUWEP stated: “It is not the intent of this policy guidance to target civilian population per se. Accordingly, planning ...will not include residential structures as objective targets.”⁵⁸ All of that said, “assured destruction” had not disappeared. NUWEP 74’s guidance to the JSC and SAC regarding attacking the “urban and economic base” in furtherance of the goal, in a general war, of “minimize[ing] the strategic power and influence of [the USSR and China] in the post-war era and to prolong their post-war recovery”⁵⁹ was:

To this end targeting will meet at least the following four criteria: (1) inflict moderate damage on facilities comprising approximately 70% of each nation’s war-supporting economic base, (2) program at least one weapon on an industrial facility in the top 250 urban areas in the Soviet Union and in the top 125 urban areas of the People’s Republic of China (ranked by economic worth), (3) program at least one weapon

55 Richard Nixon, National Security Decision Memorandum (NSDM) 242 “Policy for Planning the Employment of Nuclear Weapons” (January 17, 1974), p. 1. https://www.nixonlibrary.gov/sites/default/files/virtualibrary/documents/nsdm/nsdm_242.pdf. Accessed July 5, 2024.

56 Ibid., p. 2.

57 Ibid.

58 Office of the Secretary of Defense, “Policy Guidance for the Employment of Nuclear Weapons” [NUWEP 74], (April 3, 1974), p. 5, as posted online by GWU/NSA.

59 Ibid., Annex A to NUWEP 74, p. A-7.

on major centers of government, and (4) neutralize other targets, including military targets, critical to post-attack recovery.⁶⁰

For the historical record, it is worth noting that, for a variety of reasons, the limited options envisioned in NSDM 242 were never actually planned. For the record, it is also worth noting that NUWEP 74 unknowingly created a substantial weakness in the war plan by mandating “priorities for weapon allocation,” requiring that the United States’ best (i.e., most accurate) weapons be reserved for use against “recovery targets” which were likely not to be executed in the initial response.⁶¹ As a result, increasingly vulnerable Minuteman ICBMs were held back to hit recovery targets (which was a force execution mismatch), while smaller yield, less accurate systems were designated to hit Soviet silos (for which they were unsuited).

Carter-Reagan

President Carter’s National Security Advisor Zbigniew Brzezinski and Secretary of Defense Harold Brown were skeptical of some of the major conclusions of NSSM 169/NSDM 242 with respect to how best to deter the Soviet leadership from aggression. (Indeed, Brzezinski entertained the idea that the USSR should be targeted to reduce the White Russian leadership and population in order to allow other Soviet republics to emerge as independent countries; he failed to convince his colleagues of this approach, however.) Pursuant to a series of conversations among Carter, Brzezinski, and Brown, in summer 1977 Secretary Brown initiated a major review of U.S. nuclear targeting based substantially on all-source intelligence of Soviet goals and war aims. The result, the “Nuclear Targeting Policy Review” (NTPR) was completed in late 1978 and initiated significant changes in how the United States should best focus its deterrent policy to dissuade the Soviet leadership from attacking the United States or its allies. In doing so, it created the framework for U.S. policy which exists to the present day.

Essentially the NTPR judged NSDM 242’s conclusion that the nation which recovered first from a nuclear war would be seen as having achieved a victory, and that therefore holding Soviet recovery targets’ at risk was the United States’ primary objective, was fundamentally wrong and the product of U.S. mirror imaging rather than intelligence analysis. The NTPR concluded that the Soviet leadership truly believed in nuclear war fighting and was actively making preparations for that should war occur. As Secretary Brown noted in a report to the President: “...it is not clear that threatening to impede recovery by destroying large amounts of Soviet population and industry is the most effective deterrent, particularly in situations less than general war.”⁶²

⁶⁰ Annex A to NUWEP 74, p. A-7.

⁶¹ NUWEP 74, p. 5.

⁶² “Nuclear Targeting Policy Review Summary,” attachment to Memorandum for President Carter from Secretary of Defense Harold Brown (November 28, 1978), p. iii, as posted by GWU/NSA.

Instead the NTPR recommended that U.S. targeting policy focus on denying Soviet war aims and “making a Soviet victory, as seen through Soviet eyes, as improbable as we can make it.”⁶³ This involved placing emphasis on targeting Soviet military forces, command and control, and war-supporting industry. With respect to holding the Soviet population at risk, and holding open the possibility that future developments might cause a change, Brown informed Carter: “We have not in recent years targeted population per se nor do we propose to do so now.”⁶⁴ With respect to China, the NTPR noted improved U.S.-PRC relations and collaboration. Referring obliquely to NUWEP 74, the NTPR admitted that:

We not only do not understand the recovery process as it relates to China, but we are quite arbitrary in assigning value to those targets we select. The current requirement to program at least one weapon on an industrial facility in the top 125 urban areas in the PRC drives, to a large extent, the high weapons requirement for China targeting even though over 50 percent of China’s industry is located in 25 cities.⁶⁵

The NTPR spurred President Carter to issue a new targeting policy, Presidential Directive (PD) 59 in July 1980. The new document clearly set out the change from NSDM 242:

Overall targeting planning ...will result in a capability to choose to put the major weight of the initial response on military and control targets. ... More specifically, the following categories of targets should be covered in planning:

- Strategic and theatre nuclear forces
- Military command, control communications and intelligence capabilities
- All other military forces, stationary and mobile
- Industrial facilities which provide immediate support to military operations.

In addition, pre-planned options ... should be provided for attacks on the political control system and on general industrial capacity.⁶⁶

63 Memorandum for President Carter from Secretary of Defense Brown (November 28, 1978), p. 1.

64 Ibid., p. 4.

65 “Nuclear Targeting Policy Review Summary,” op. cit., p. viii.

66 Jimmy Carter, Presidential Directive 59, “Nuclear Weapons Employment Policy,” p. 3, as posted online by GWU/NSA.

The guidance specifically mandated that “methods of attack should be chosen to limit collateral damage in urban areas, general industry and population outside those categories...and where appropriate overall plans should include the option of withholds to limit such collateral damage.”⁶⁷ While the NTPR and PD-59 did not eliminate the ultimate requirement to hold the general Soviet industrial-economic base at risk (as distinct from that portion of the base providing immediate support to wartime operations), it reduced the importance of that requirement significantly. When the Reagan administration issued its presidential nuclear targeting guidance, National Security Decision Directive 13 in October 1981, the relative downgrading of that target set was carried forward. The overarching guidance in NSDD 13 stated: “The United States must be able to deny the Soviet Union a military victory....we must have the capability ... if necessary to cripple the capability of the Soviet Union and its allies to conduct effective military operations.”⁶⁸

This was reflected in NSDD 13’s “general order of priorities for weapon allocation”:

- Strategic and theater nuclear forces and C3I;
- National level political and military leadership and the associated control structure;
- All other military forces, stationary and mobile, and associated C3I;
- Industrial facilities which provide immediate support to military operations; and
- The industrial/economic base of the Soviet Union (and its allies).⁶⁹

Further, options for attacking (1) the national-level political and military leadership and (2) the Soviet industrial/economic base (and that of their allies as appropriate) “will be designed to be withheld for a protracted period, to leave the Soviets with sufficient national control structure and industrial/economic resources at risk ...so that they have a strong incentive to seek conflict termination short of an all-out attack on our cities and economic assets.”⁷⁰ NSDD 13 mirrored PD-59’s policy guidance on limiting collateral damage.

By 1985, Secretary of Defense Weinberger tightened the strictures of collateral damage. In a memorandum to the Chairman of the Joint Chiefs in November 1985, Weinberger stated:

The general proscription against targeting civilian population per se, which results in guidance not to target deliberately residential

67 Presidential Directive 59, op. cit., pp. 3-4.

68 Ronald Reagan, National Security Decision Directive (NSDD) 13, “Nuclear Weapons Employment Policy,” (October 13, 1981), p. 2, as posted online by GWU/NSA.

69 Ibid., p. 2.

70 Ibid.

areas, is intended primarily to cause our nuclear war-plans to conform with Western morality. While we may hope that the Soviets would also refrain from targeting civilians, we are not holding Russians at risk of later destruction to gain Russian reciprocity. Avoidance of unnecessary civilian casualties, where appropriate, is thus a U.S. goal. ...Directly targeting civilians is correctly interpreted as a targeting prohibition.⁷¹

Bush, Clinton, Bush, Obama, Trump, and Biden

The key nuclear targeting documents of the George H.W. Bush, Clinton, George W. Bush, Obama, Trump, and Biden administrations remain classified. That said, significant changes to the war plans (and to the U.S. nuclear arsenal, both strategic and non-strategic) occurred under the leadership of Defense Secretary Dick Cheney in the George H.W. Bush administration. Similarly, some major changes to the plans were made under President Clinton and were codified in his Presidential Decision Document (PDD) 60. Neither those changes nor Bush 41's affected the so-called "counterforce vs. countervalue" debate of interest to this publication. The George W. Bush administration largely treated nuclear-targeting policy as an afterthought and did not introduce any changes to the planning approach it inherited from its predecessors. President Barack Obama's administration, viewing the threat from Russia as a fading Cold War artifact, focused on nonproliferation, nuclear terrorism, and arms reductions; targeting policy was largely unaffected in his eight years, and again there was no change in what it had inherited from the Carter-Reagan approach. The same applied to Donald Trump. In 2018 his Defense Secretary Jim Mattis released a Nuclear Posture Review which, while recognizing the growing threats from Russia and China, maintained what had become a constant in U.S. policy, both with respect to how best to deter potential aggressors and with regard to targeting civilians:

"[The U.S. deterrent tailored to Russia...will be capable of holding at risk, under all conditions, what Russia's leadership values most."⁷²

"[The United States will] maintain the capability to credibly threaten intolerable damage as Chinese leaders calculate costs and benefits such that the costs incurred ...would vastly outweigh any benefits."⁷³

"...nuclear operations would adhere to the law of armed conflict..."⁷⁴

71 Secretary Casper Weinberger memorandum for Chairman, Joint Chiefs of Staff (November 12, 1985), as posted: Caspar Weinberger, "Memorandum for the Joint Chiefs of Staff: Collateral Damage Restraint," (November 12, 1985), (declassified September 6, 2018). https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/MDR_Releases/FY18/FY18_Q2/Collateral_Damage_Restraint_12Nov1985.pdf. Accessed July 5, 2024. My thanks to Matt Coslow of NIPP for pointing me to this unclassified document.

72 Secretary of Defense James Mattis, *Nuclear Posture Review* 2018, p. 30.

73 *Ibid.*, p. 32.

74 *Ibid.*, p. 23.

The Nuclear Posture Review released in 2022 by the Biden administration essentially repeats these policies:

“...central to U.S. deterrence strategy is the credibility of our nuclear forces to hold at risk what adversary leaderships value most.”⁷⁵

“long-standing U.S. policy is to not threaten civilian populations or objects and the U.S. will not intentionally target civilian populations or objects in violation of the Law of Armed Conflict”⁷⁶

In November 2024, the Biden administration released a report to Congress on Nuclear Employment Strategy (the “Section 491 Report”), which was somewhat more explicit regarding U.S. targeting objectives than was the 2022 NPR:

The [U.S. nuclear] guidance continues to emphasize the need to, first and foremost, hold at risk what adversaries value most. It also reiterates the need to maintain counterforce capabilities to reduced potential adversaries’ ability to employ nuclear weapons against the United States and its allies and partners and does not rely on a countervalue or minimum deterrence approach. The Guidance also requires that all nuclear plans must be consistent with the Law of armed conflict...⁷⁷

Concluding Thoughts and Observations

What, then are we to take away from the historical record? First, it is clear that the United States never had a targeting policy focused solely and exclusively on inflicting civilian casualties. To be sure, city destruction would have been the result of the policies of various administrations from Truman through Nixon/Ford as they sought to be able to “destroy the CPSU,” “paralyze the Russian nation,” or “impose intolerable punishment.” At the same time, the Johnson administration, the only one which provided guidelines on the destruction of Soviet industry and population, also viewed withholding attacks on Soviet urban centers as a form of damage limitation—hoping by not striking those targets to induce Soviet restraint regarding U.S. urban-industrial targets. It was only until the Carter and Reagan administrations that guidance to attack the general Soviet industrial-economic base (as distinct from its war-supporting industry) became downgraded and eventually was abandoned.

Second, both surprisingly and unsurprisingly, the same target elements have appeared in every administration’s nuclear war plans post-Truman: leadership and control capabilities, key military forces both nuclear and conventional, and

⁷⁵ Joseph R. Biden, *Nuclear Posture Review* 2022, p. 11.

⁷⁶ *Ibid.*, p. 8.

⁷⁷ U.S. Department of Defense, *Report on the Nuclear Employment Strategy of the United States* (submitted pursuant to 491 of Title 10, U.S. Code) (November 7, 2024).

war-supporting industry. While this continuity may seem incongruous to some, if a nation goes to war these are precisely the kinds of enemy assets it would want to destroy—and to make credible threats to destroy as a deterrent to aggression or war initiation. That said, as U.S. intelligence collection capabilities increased and U.S. attack modeling skills improved (“nodal analysis” being a key example), the number of specific targets within each category declined—sometimes gradually, other times more sharply.

Third, the introduction of civilian review and control over the war plans resulted in tailoring the plans to meet political as well as military objectives.

Finally, if the U.S. government seeks to deter authoritarian leaders from attacking the United States and/or our allies, we need to focus our deterrent threats on those assets which the enemy leader(s) values most, most especially those capabilities the regime(s) would believe essential to sustaining itself in power and dominating a post-war world. This concept, first introduced as policy in the Carter administration’s PD-59 and carried forward in fairly recognizable form ever since, should be the focus of scholars and journalists (and policymakers).

Law and the Contemporary Strategic Debate

Brad Clark⁷⁸

China's strategic breakout has served as a catalyst, bringing legal arguments to the center of the nuclear strategy debate. During both the Cold War and post-Cold War eras, legal concerns were mostly absent from the strategic debate. The law of armed conflict (LOAC)⁷⁹ was understood to prohibit counterpopulation strategies, but these were not seriously urged after the Cold War ended. This has changed. Concerns about potentially increased U.S. force requirements in the emerging security environment have caused some policy advocates, opposed to increasing U.S. nuclear forces, to question legal restrictions on nuclear targeting. They argue that by favoring counterforce over countervalue strategies, LOAC inhibits effective deterrence—so much so that they question the value of legal restrictions on targeting civilians and civilian infrastructure. However, much of the legal analysis supporting their arguments is flawed. Casting the law aside is neither helpful nor necessary. Although nuclear weapons make the application of legal principles such as proportionality conceptually challenging, properly understood, LOAC does nothing to inhibit effective deterrence strategy. The strategic debate should stay focused on strategy rather than on misapprehensions of legal constraints.

Some Background

The impact of nuclear weapons on military strategy led strategist Bernard Brodie to remark, “[e]verything I have written is now obsolete.”⁸⁰ Nuclear weapons had a similar impact on the legal and ethical debates concerning the means and methods of war that emerged after World War II. The devastation of technology-enabled total war, which climaxed in the Hiroshima and Nagasaki bombings, led some to question the relevance of international law. Emblematic of such thinking is Sir Arthur “Bomber” Harris’s observation that “[i]nternational law can always be argued pro and con, but in this matter of the use of aircraft in war there is, it so happens, no international law at all.”⁸¹ The comment is best understood not as “a reflection on the lawlessness on the

78 The views and opinions, legal or otherwise, presented in this article are the author's and do not necessarily reflect the views of the Department of Defense.

79 The terms “law of war (LOW),” “international humanitarian law (IHL),” and the “law of armed conflict (LOAC)” are often used interchangeably. For the purposes of this paper, the author will use “LOAC” as that is the term used by Fetter, Glaser, and Acton; and by Sagan and Weiner in the articles that underpin much of this discussion (see citations, *infra*).

80 Lawrence Freedman and Jeffrey Michaels, *The Evolution of Nuclear Strategy* (London: Palgrave MacMillan, 4th ed., 2019), pp. 38-39, citing Fred Kaplan, *Wizards of Armageddon* (Stanford, CA: Stanford University Press, 1983), p. 9.

81 W. Hays Parks, “Air War and the Law of War,” *Air Force Law Review* 32 (1990), p. 2.

part of any or all parties to the conflict,” but as “a recognition of the limits of law to total war.”⁸² This recognition applies with even more force to nuclear weapons.

Of all wars, nuclear war has the most potential to become “total.” Brodie also observed that “[e]verything about the atomic bomb is overshadowed by the twin facts that it exists, and its destructive power is fantastically great.”⁸³ These twin facts created a seemingly insuperable barrier to legal regulation. Accordingly, initial efforts to constrain nuclear employment involved ethical and moral, rather than legal, arguments which proved difficult enough. The morality of war is commonly evaluated through the lens of the “just war” doctrine, which addresses both *jus ad bellum* and *jus in bello* concerns. Respectively, these refer to rules that (1) govern the resort to war and (2) govern the means and methods used in war. Some commenters believed nuclear weapons “exploded the just war doctrine” and called into question both *jus ad bellum* and *jus in bello* limits.⁸⁴

With “The Challenge of Peace: God’s Promise and Our Response,”⁸⁵ a pastoral letter issued by the U.S. Catholic Bishops’ Conference in 1983, the moral debate reached its highest pitch. A decade later the legal debate ignited, initiated by a case before the International Court of Justice culminating in their 1996 advisory opinion, *The Legality of the Threat or Use of Nuclear Weapons*.⁸⁶ Distilled down to its fundamental points, the Bishops’ Letter opined that use of nuclear weapons in most circumstances would be immoral, but that possession for the purposes of deterrence is acceptable as an interim step to disarmament.⁸⁷ The ICJ ruled that nuclear weapons are not *per se* illegal, that the law of armed conflict applies to their use or threat of use, that it was difficult for the court to see how use could comply with legal rules, but that use might be lawful “in an extreme circumstance of self-defense, in which the very survival of a State would be at stake.”⁸⁸

The conclusions of both documents were controversial. Although each document was criticized at the time of issuance and the debates continue,⁸⁹ both remain enduring anchor points. Each had differing points of emphasis and conclusions,

82 Ibid.

83 Freedman and Michaels, p. 667.

84 Joseph S. Nye, Jr., *Nuclear Ethics* (New York: The Free Press, 1986), p. 44.

85 U.S. Catholic Bishops’ Pastoral Letter, “The Challenge of Peace: God’s Promise and Our Response” (May 3, 1983). <https://www.usccb.org/resources/challenge-peace-gods-promise-and-our-response-may-3-1983> (hereafter Bishops’ Letter).

86 “The Legality of the Threat or Use of Nuclear Weapons, International Court of Justice Advisory Opinion,” *ICJ Reports* 1996, p. 226. <https://www.icj-cij.org/case/95> (hereafter ICJ Advisory Opinion).

87 Bishops’ Letter, ¶ I.B.1. and ¶¶ 169-177 (The Moral Assessment of Deterrence).

88 ICJ Advisory Opinion, p. 41.

89 See, e.g., Albert Wohlstetter, “Bishops, Statesmen, and Other Strategists on the Bombing of Innocents,” *Commentary* (June 1983), p. 15; Paul W. Kahn, “Nuclear Weapons and the Rule of Law,” *NYU Journal of International Law and Policy* 31 (1989-1990), p. 349. See, also, analysis of recent Catholic pronouncements arguing against nuclear weapons including the morality of deterrence. Heather Williams, “Ultima Ratio: Papal Statements on Nuclear Weapons and Just War Doctrine,” in *Morality and Nuclear Weapons: Practitioner Perspectives*, Brad Roberts, ed. (Livermore, CA: Center for Global Security Research, 2023).

but because they tackled the destructive potential of nuclear weapons through different lenses they should be read as complementary, not competing, analyses.⁹⁰ Notably, there is one subject where the bishops and the court are completely aligned: the intentional targeting of civilians. The Bishops' Letter declared "[u]nder no circumstances may nuclear weapons. . . be used for the purpose of destroying population centers. . . ." ⁹¹ The ICJ ruled that "States must never make civilians the object of attack. . . ." ⁹²

Yet, it is just this issue that reemerged in the contemporary strategic debate between "counterforce" and "countervalue" targeting. The contours of this debate are discussed elsewhere in this volume. For present purposes, it is enough to note that arguments in favor of counter-population targeting immediately raise legal concerns, as indeed the countervalue proponents recognize. To be clear, the countervalue advocates do not urge a strategy based solely on counter-population targeting, but they do argue that counter-population targeting should be the ultimate sanction if demonstration or other de-escalation strikes fail to "deter large scale attacks on the United States homeland."⁹³

Admitting a strategy is legally dubious begs several questions: What legal issues relate to nuclear targeting? Given the destructive power of nuclear weapons, is there any practical legal difference between different strategic approaches? How does LOAC inhibit nuclear strategy, if at all? A review of the law most relevant to nuclear weapon use reveals that there are legal and ethical differences between counter-population and counterforce targeting. Lawful counterforce targeting is neither so broadly destructive as to be functionally equivalent to counter-population targeting nor so narrow in target selection and execution as to undermine punitive deterrent threats. Counter-population targeting, however, is clearly unlawful except in the narrow circumstances of belligerent reprisal. Short of barring strategies dependent on counterpopulation targeting, LOAC may inform—but does not impede—effective deterrence strategy.

The Legal and Moral Framing of the Strategic Debate

Countervalue advocates do not see LOAC as particularly relevant or helpful for deterrence. LOAC, after all, is focused on regulating conduct in war, not preventing war, which is the point of deterrence strategy.⁹⁴ Worse, they argue, application of LOAC

90 A notable example, relevant to this paper, relates to reprisals. The Bishop's Letter spoke against attacks directed at civilians even in retaliation, which could qualify as a "reprisal" under the law of armed conflict. The ICJ Advisory Opinion declined to rule on reprisals.

91 Bishop's Letter, p. ¶ II.A.1, and ¶ 147.

92 ICJ Advisory Opinion, p. 35.

93 Keir Lieber and Darryl G. Press, "U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity," Atlantic Council Scowcroft Center for Strategy and Security Issue Brief (April 2023), p. 9.

94 Steve Fetter and Charles Glaser, "Legal, but Lethal: The Law of Armed Conflict and US Nuclear Strategy," *The Washington Quarterly* 45, no. 1 (Spring 2022); p. 27.

to nuclear strategy may actually be dangerous, because it ties the United States to an ineffective counterforce strategy rather than a more effective countervalue strategy aimed at destroying the adversary's society and infrastructure, including by the intentional targeting of civilians (that is, by counter-population targeting).⁹⁵ In their view, a countervalue strategy, even one with counterpopulation elements, is more ethical than a counterforce strategy because in practice a large counterforce nuclear employment would do damage equivalent the proposed counter-population employment.⁹⁶ More fundamentally, they do not believe a counterforce strategy will work.⁹⁷ All things being equal in terms of devastation, the more ethical choice is the strategy that can best deter war. Consequently, they conclude, the United States should prioritize effective and affordable countervalue nuclear strategies over compliance with legal rules prohibiting counter-population targeting.⁹⁸

Some see a way out of this legal trap. If the United States were to adopt a less restrictive view of LOAC that permitted belligerent reprisals, or if the United States were to consider certain economic and industrial targets lawful,⁹⁹ then the legal straitjacket is removed, and their preferred strategy can be adopted. Similarly, other countervalue advocates argue that legal exemptions or interpretations (such as permitting reprisals) could enable their more frankly counter-population strategy.¹⁰⁰ The bottom line is that legal restrictions should not be permitted to undermine effective strategy or stimulate an arms race.¹⁰¹

There is much to debate in these arguments in terms of deterrence logic, ethics, and legal interpretation. Regarding only the latter, many of the contentions regarding LOAC's negative effect on nuclear strategy are based on misunderstandings of legal rules. Before turning to these issues, however, the ethical argument should be addressed briefly as it retreads Cold War debates. To simplify, early nuclear strategies focused on deterrence by punishment through societal destruction. Unsurprisingly, this fueled ethical arguments because these strategies "put the threat of genocide

95 Ibid., pp. 7-28; Charles Glaser, James M. Acton, and Steve Fetter, "The U.S. Nuclear Arsenal Can Deter Both China and Russia: Why America Doesn't Need More Missiles," *Foreign Affairs* (October 5, 2023); "The U.S. Nuclear Arsenal Can Deter Both China and Russia," *Foreign Affairs* (October 5, 2023); Lieber and Press, p. 2.

96 Glaser, Acton, and Fetter; Lieber and Press, p. 6.

97 Glaser, Acton, and Fetter (counterforce strategy "infeasible"); Fetter and Glaser, p. 29 (retaliation against military forces threatens inadequate costs); Lieber and Press, p. 3 (their approach "may pose a stronger deterrent." Also, implicit in their argument that LOAC should be set aside if it inhibits strategies that prevent war is the argument that their preferred strategy better prevents war. Ibid., pp. 11-12).

98 Glaser, Acton, Fetter; Lieber and Press, pp. 12-13; Fetter and Glaser, p. 35.

99 Fetter and Glaser, p. 30. While the authors believe reprisals are unlawful, they do note that some experts argue otherwise, citing Christopher Ford, et al., "Correspondence: Are Belligerent Reprisals Against Civilians Legal," *International Security* 46, no. 2 (2021), pp. 166-168.

100 Lieber and Press, p. 12.

101 Ibid., p. 6.

in the center of American strategy.”¹⁰² U.S. nuclear strategy evolved across the Nixon, Ford, Carter, and Reagan administrations through iterations of counterforce strategies.¹⁰³ These included more developed strategy elements related to limited nuclear options to demonstrate and encourage reciprocal restraint.¹⁰⁴ This strategic evolution generated a moral and ethical debate similar to that surrounding the current countervalue debate.¹⁰⁵

For example, the argument that a strategy is more moral because it is more effective is not new. This argument was used by both sides of the Cold War debate.¹⁰⁶ There is no definitive answer to contending views regarding the moral weight of effectiveness because, thankfully, there is no empirical evidence to settle the debate. However, utilitarian arguments centered on effectiveness eventually reach an ethical blind alley. As Paul Ramsey argued of combatants during the ascendancy of assured destruction: “if to protect his own children he should resist an aggressor, that gives him no leave to intend and directly do the death of the aggressor’s children as a means of dissuading him from his evil deeds.”¹⁰⁷

If strategic effectiveness is not a useful measure of strategic morality, one is left with strategic design—meaning how the strategy will achieve its intended end state—as the discriminator. Here differences emerge. As noted above, countervalue proponents attempt to avoid these differences by arguing that, in practice, counterforce strategies would do damage equivalent to the proposed countervalue strategies. In essence, they argue effect matters, not intent. For example, they argue “the societal damage that would be inflicted by a comprehensive counterforce strike would not be significantly less destructive than that wrought by attacks aimed at infrastructure.”¹⁰⁸ Also, a “counterforce-only approach to U.S. nuclear strategy would do little—and perhaps nothing—to reduce civilian casualties if there were a major

102 Freedman and Michaels, p. 160.

103 The Reagan administration’s nuclear weapons employment policy was the final Cold War iteration of the line of thinking that began with the NSSM-169. National Security Decision Directive 13, Nuclear Weapons Employment Policy, Reagan Library 1, <https://www.reaganlibrary.gov/public/archives/reference/scanned-nsdds/nsdd13.pdf>.

104 Caspar Weinberger, “Memorandum for the Joint Chiefs of Staff: Collateral Damage Restraint” (November 12, 1985), (declassified, September 6, 2018). https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/MDR_Releases/FY18/FY18_Q2/Collateral_Damage_Restraint_12Nov1985.pdf. Accessed June 18, 2024.

105 For the contemporary counterargument to the moral/ethical elements of the Fetter and Glaser, and Lieber and Press articles, see Keith B. Payne, John R. Harvey, Franklin C. Miller, and Robert Soofer, “The Rejection of Intentional Population Targeting for ‘Tripolar’ Deterrence,” National Institute for Public Policy Information Series, no. 563 (September 26, 2023), p. 5; Keith B. Payne, “Deterrence via Intentional Civilian Targeting: A Dangerous Cold War Anachronism,” National Institute for Public Policy Information Series, No. 569 (December 6, 2023): 4.

106 Robert Jervis, for example, saw a counterforce strategy as more moral than countervalue “only if it kept the war limited” (and he believe it would not). Robert Jervis, *The Meaning of the Nuclear Revolution*, (Ithaca, NY: Cornell University Press, 1990), p. 118. Advocates of counterforce strategy felt otherwise, and effectiveness was an element of their moral reasoning. See, e.g., Colin S. Gray, *Nuclear Strategy and Strategic Planning* (Philadelphia: Foreign Policy Research Institute, 1984), p. 3.

107 Paul Ramsey, *The Just War* (Lanham, MD: Rowman & Littlefield, 2002), p. 145.

108 Glaser, Acton, and Fetter.

nuclear war.”¹⁰⁹ This same argument is advanced by advocates of more restrictive legal and policy constraints.¹¹⁰

Note the use above of the terms “comprehensive,” “significantly,” and “major.” “Significantly,” in particular, is doing a lot of work. The countervalue advocates ignore that counterforce strategies are designed to demonstrate and encourage restraint to avoid a “comprehensive” counterforce strike or a “major nuclear war,” in part by avoiding unnecessary civilian casualties.¹¹¹ The strategic design of counterforce strategies is to avoid worst-case collateral damage outcomes, even if escalation control fails. The strategic design of counter-population strategies is to inflict worst-case collateral damage outcomes if escalation control fails. They are comparing the outcome of a strategy not working as designed against one working as designed. But even within that framing their comparative analysis fails. As one expert notes, there is a considerable difference in worst-case outcomes between a strategy designed to intentionally target civilians and a strategy designed to avoid or minimize civilian casualties,¹¹² even if both ultimately result in large numbers of urban strikes.

Put differently, countervalue advocates equate proportionality concerns (created by large-scale counterforce attacks) with distinction concerns (created by attacks directed against civilian population and infrastructure). Since civilians are equally dead—as shown, a debatable point—they argue there is no moral difference between the two strategies and so their proposals are better because they at least will work. However, proportionality concerns can be addressed in counterforce targeting, whereas counterpopulation targeting is indiscriminate by design. Counterpopulation strategies, however well intentioned, gloss over “the qualitative moral distinction between tragically killing or sacrificing human beings as an indirect result of knocking out military targets. . . and the murderous policy of deliberately killing them in totally devastating counter-city warfare.”¹¹³

Turning from moral to legal questions, this discussion will focus on those elements of LOAC most relevant to the current strategic debate: (1) application of LOAC to nuclear strategy; (2) belligerent reprisals; (3) boundaries of distinction and lawful

109 Lieber and Press, p. 6.

110 For example, Scott Sagan and Allen Weiner cite Walter Slocombe’s statement that “[m]assive attacks on industrial targets, transportation, and material resource targets,” associated with “counter-recovery” targeting, “would not be distinguishable from attacks on the population as such.” Scott D. Sagan and Allen S. Weiner, “The Rule of Law and the Role of Strategy in U.S. Nuclear Doctrine,” *International Security* 45, no. 4 (Spring 2021), pp. 140-141. However, Slocombe’s point was not that counterforce attacks are indistinguishable from counter-population attacks, but that robust intelligence support was required to support a limited nuclear attack on economic bottlenecks, so that it would be distinguishable from an all-out attack and so that massive attacks would not be required to damage Soviet industry. Walter Slocombe, “Preplanned Operations,” *Managing Nuclear Operations*, Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds. (Washington, DC: Brookings, 1987), pp. 127-129. However, Slocombe did note that large-scale attacks at economic nodes would “kill millions and destroy large areas of cities.” *Ibid.*, p. 127.

111 Weinberger, *Collateral Damage Restraint*.

112 Payne, “Deterrence via Intentional Civilian Targeting,” p. 7.

113 Ramsey, p. 213. Ramsey further notes that “a line exists between right and wrong and it is not discovered by calculating numbers killed or saved.” *Ibid.*, p. 218.

targets; and (4) application of the principle of proportionality and the supporting principle of precaution to nuclear employment. Proportionality is particularly difficult as analysis gets stuck on collateral effects and undervalues or ignores military advantage.¹¹⁴ The discussion will conclude with a brief review of how escalation concerns, bound up in any assessment of nuclear employment, tend to complicate legal analysis.

Applicability of the Law of Armed Conflict

Proponents of counterpopulation targeting start from the premise that the United States only recently began to apply LOAC to nuclear strategy.¹¹⁵ The implication is that the United States may yet reverse, or at least mitigate, this recent policy choice. As one article phrased it, “allowing international humanitarian law to guide U.S. nuclear strategy could make a nuclear war more likely,”¹¹⁶ implying we need not allow it. Similarly, debates “over deterrence and law are political as much as they are legal, and key U.S. allies . . . will accept the hybrid [counter-population] approach if they understand it is the best way to provide a credible deterrent. . . .”¹¹⁷ If it were true that application of LOAC to nuclear strategy was a new policy direction, it might be possible to manage the political and diplomatic consequences of reversing such a policy (although one can imagine the headlines). But it is not true.

The idea that applying LOAC to nuclear employment is an Obama administration initiative appears to stem from a 2021 article in which the authors point to the “unqualified declaration [in 2013] by the U.S. government that the law of armed conflict (LOAC)—including the principles of distinction, proportionality, and precaution—applies to all plans and decisions concerning the use of nuclear weapons.”¹¹⁸ The authors start with two correct premises: (1) that the U.S. Cold War position was that Additional Protocol I (AP I) to the 1949 Geneva Conventions (which codified LOAC targeting principles) did not apply to nuclear weapons, and (2) that the Obama administration in 2013 directed the adherence to LOAC. But from this they draw the incorrect conclusion that principles such as distinction and proportionality for the first time applied to nuclear strategy and plans.¹¹⁹ The U.S. position continues

114 As will be discussed, *infra*, this weighting error is most evident with advocates of more restrictive rules, because compliance with proportionality drives their arguments. See Sagan and Weiner, *supra* at footnote 33, arguing for a restrictive interpretation of the legal principle of precaution; Jeffrey G. Lewis and Scott D. Sagan, “The Nuclear Necessity Principle: Making U.S. Targeting Policy Conform with Ethics & the Laws of War,” *Daedalus* 145, no. 4 (Fall 2016), p. 62; George Perkovich and Pranay Vaddi, “Proportionate Deterrence: A Model Nuclear Posture Review,” (Washington, DC: Carnegie Endowment for International Peace, 2021).<https://carnegieendowment.org/2021/01/21/proportionate-deterrence-model-nuclear-posture-review-pub-83576>. (This argues, *inter alia*, for a more restrictive declaratory policy.)

115 Lieber and Press, p. 12; Fetter and Glaser, p. 26.

116 Glaser, Acton, and Fetter.

117 Lieber and Press, p. 12.

118 Sagan and Weiner, p. 127.

119 *Ibid.*, pp. 127-128. As noted in footnote 37, Sagan and Weiner’s response to LOAC constraints is not a call to put them aside, but for increased discrimination and restrictive measures of precaution. See discussion, *infra*.

to be that AP I does not apply to nuclear weapons and the 2013 declaration did not change this.¹²⁰ To be clear, this is not some post hoc effort by the United States to avoid applying AP I (which, inter alia, bans reprisals—more on this below) to nuclear weapons. Any inference or argument to this effect is wrong.¹²¹ Rather, the International Committee of the Red Cross (ICRC) began the additional protocol discussions with the understanding it would not apply to nuclear weapons and the United States, the United Kingdom, and the USSR all endorsed the ICRC position at the outset.¹²² Although AP I does not apply to nuclear weapons, many legal concepts codified in AP I do, and this predates the 2013 declaration.

Unambiguous application of targeting law understood to apply to conventional weapons to nuclear weapons does appear to be a post-Cold War development. In reviewing the strategic documents from the 1970s and 1980s, one searches in vain for references to legal constraints. Restraint in nuclear targeting appears driven primarily by strategic concerns rather than by legal obligation.¹²³ The debate on the morality of different deterrence concepts served, to a degree, as a proxy for the absent legal debate. What is ethical may not always be legal, and what is legal may not always be ethical, but “particularly with the law of war, the two are inextricably intertwined.”¹²⁴ Although legal rules would seem to provide more bright line rules than ethical theory, in practice many LOAC principles offer considerable space for differing interpretations. For that reason, the ethical debate surrounding Cold War nuclear strategy provides some indication of how a legal debate might have progressed. The

120 “Remarks at a Meeting of the Sixth Committee on Agenda Item 81: Status of the Protocols Additional to the Geneva Conventions of 1949,” David Bigge, Attorney Advisor U.S. Mission to the United Nations (October 17, 2022). <https://usun.usmission.gov/remarks-at-a-meeting-of-the-sixth-committee-on-agenda-item-81-status-of-the-protocols-additional-to-the-geneva-conventions-of-1949/> (noting the United States still has objections to AP I). *United States Department of Defense Law of War Manual* (July 2023), ¶ 6.18.3.

121 James Acton, “Two Myths about Counterforce,” *War on the Rocks* (November 26, 2023). <https://warontherocks.com/2023/11/two-myths-about-counterforce/>. Accessed June 18, 2024. In dismissing the U.S. statement to the ICJ regarding adherence to the principles of distinction and proportionality, as “short of an unconditional commitment to apply the law of armed conflict to nuclear targeting,” Acton notes “[i]ndeed, in 1985 the Joint Chiefs of Staff privately and successfully opposed U.S. ratification of the 1977 Additional Protocol I to the 1949 Geneva Conventions, the international agreement most relevant to nuclear targeting” (emphasis added). The comment ignores the unambiguous fact that AP I was negotiated with the specific understanding it would not apply to nuclear weapons and ignores that the principles the United States admitted adherence to before the ICJ, distinction and proportionality, are precisely those most applicable to nuclear targeting. See Theodore Richard, “Nuclear Weapons Targeting: The Evolution of Law and U.S. Policy,” *Military Law Review* 224, no. 4 (2016), p. 950. AP I is relevant to nuclear weapons only to the extent it reflects customary international law.

122 Richard, “Nuclear Weapons Targeting,” p. 938. There are excellent reasons why this would be so. The negotiations already had to deal with issues related to wars of national liberation, which were contentious enough. Parks, “Air War,” pp. 74-79. Adding nuclear weapons to the mix might have made agreement on other critical issues impossible.

123 There are suggestions of legal concerns over collateral damage, without specific reference to international law. For example, the 1974 Nuclear Weapons Employment Policy states that “is not the intent of this policy guidance to target civilian populations per se,” and later that every “reasonable effort will be made to limit attacks in the vicinity of densely populated areas.” But this later statement relates to regional nuclear attacks and seems motivated by concerns over damage to allied populations and forces. This suggests strategic and policy, not legal, rationales for the text. Office of Secretary of Defense, “Policy Guidance for the Employment of Nuclear Weapons,” (April 3, 1974), with enclosure from Major Gen. John A. Wickham to General Scowcroft (April 10, 1974); pp. 5, 7. <https://nsarchive.gwu.edu/document/20307-national-security-archive-doc-22-office>. Accessed June 18, 2024.

124 Parks, “Air War,” p. 4.

evolution of Cold War nuclear strategy towards counterforce, limited nuclear options, and restraint may have also enabled eventual legal review by forcing planners to “treat nuclear weapons as weapons and not as instruments of the wrath of God.”¹²⁵ Lawyers can more readily review the former than the latter.

But there was little substantive legal debate until the 1990s and the advent of the ICJ Advisory Opinion. That LOAC should apply to nuclear weapons should not be controversial, despite the awesome destructiveness of these weapons. Whether a *lex specialis* of nuclear targeting exists or not,¹²⁶ if it does exist, it is not well developed. Lawyers (and courts) reviewing nuclear plans, strategy, and operations must start somewhere, and in the absence of specialized rules for nuclear weapons must start with treaty and customary international law. Indeed, the only court to review actual use of nuclear weapons in war, the District Court of Tokyo in the Shimoda case, applied extant international humanitarian law as a matter of course, rejecting the argument that “a new weapon by its very nature cannot be subject the regulation of international law.”¹²⁷ The ICJ Advisory Opinion reached the same conclusion on the applicability of LOAC to nuclear weapons and was not challenged on this point by the nuclear weapons states.¹²⁸ The issue was not whether but how the law applied.

General Robert Kehler, former Commander, United States Strategic Command, speculates that legal involvement in nuclear planning, at least at the operational level, was prompted by the litigation in the ICJ.¹²⁹ Another expert finds evidence of legal involvement in nuclear “battle staff” work dating to the time the United States Strategic Command was stood up,¹³⁰ a few years before the ICJ case. The Department of Defense issued its first Law of War Program memorandum in the early 1970s. This document directed the armed forces to comply with the law of war in conducting military operations and “related activities,”¹³¹ which presumably encompassed planning. It appears the process of embedding legal review into operational planning

125 Colin Gray, “Nuclear Strategy and Strategic Planning,” p. 43.

126 Parks, “Air War,” p. 13, footnote 52; Richard, “Nuclear Weapons Targeting,” p. 866. Richard appears to base his argument on the ready acceptance of counterpopulation strategies without legal debate during the early Cold War.

127 *Ryuichi Shimoda et al. v. State, Japan*, District Court of Toyko (December 7, 1963). Accessed at National Practice - Shimoda case (Compensation claim against Japan brought by the residents of Hiroshmina & Nagasaki), Tokyo District Court, 7 December 1963 (icrc.org). The court found the bombing “indiscriminate” under existing law because the damage was indistinguishable from an indiscriminate attack but denied recover to the plaintiffs (survivors) owing to sovereign immunity. The legality of the two bombings remains a debatable issue. See Richard, p. 965: “The atomic strikes on Hiroshima and Nagasaki were lawful under the laws of war existing in 1945.”

128 Newell L. Highsmith, *On the Legality of Nuclear Deterrence* (Livermore, CA: Center for Global Security Research, 2019), p. 15.

129 C. Robert Kehler, “Nuclear Weapons & Nuclear Planning,” *Daedalus* 145, no. 4 (Fall 2016), p. 59.

130 Richard, p. 946.

131 Department of Defense Directive 5100.77 (DOD Law of War Program) (July 10, 1979), para. E.1 (superseding similar language in the original 1974 issuance; Law of War Manual, ¶ 18.1.1.

was gradual, beginning with this issuance, accelerating after AP I came into force,¹³² and concluding around the time of the ICJ Advisory Opinion.

A 1996 article by Charles Dunlap (at the time Staff Judge Advocate of United States Strategic Command) details the level of legal involvement at the operational level.¹³³ It was extensive then, and today legal involvement is pervasive at the combatant command level and at the policy level. At the command level, “[l]egal constraints are implemented at every step in the planning process via a combination of target selection and weapon application techniques, and legal advisors are a permanent presence in planning and decision making.”¹³⁴ At the policy level, in the experience of this author, no high-level guidance is issued to the force without review by Chairman’s Legal Counsel and the Department of Defense Office of General Counsel (and by military department and interagency lawyers as appropriate).¹³⁵ For example, the comprehensive process that produced the Obama administration’s nuclear employment guidance¹³⁶ would of necessity have included legal review before it went to leadership for decision and issuance. This matters because the requirement that military planning and operations comply with the law of armed conflict is not a recent policy change. It was not ordered as a fig leaf to cover lack of progress on disarmament in general, or the Prague Agenda in particular, or a measure to counter civil society momentum by the Ban Treaty movement. Rather, it is ingrained in the United States military and is now part of the American way of war. It is not an afterthought, but a commitment not lightly tossed aside to arguably improve deterrence posture or because arms racing might be costly.¹³⁷

Belligerent Reprisals

Proponents of counter-population targeting see belligerent reprisals as a potential way out of LOAC restrictions on their preferred strategy, but regard reprisals as prohibited under international law.¹³⁸ This is incorrect. Although belligerent reprisals violate AP I, and many commenters believe reprisals are also banned under customary

132 Richard, p. 945, citing AP I, art. 82. The United States complies with those elements of AP I it recognizes as customary international law, including art. 82.

133 Charles Dunlap, “Taming Shiva: Applying International Law to Nuclear Operations,” *Air Force Law Review* 42 (1997), pp. 167-169. He also describes study of the legal process that occurred coincident with the ICJ proceedings. *Ibid.* Anyone with executive branch experience can imagine how the ICJ case might have triggered such a study.

134 General C. Robert Kehler, “Commanding Nuclear Forces,” in *Managing Nuclear Operations in the 21st Century*, eds. Charles Glaser, Austin Long, and Brian Radzinsky (Washington, DC: Brookings Institute Press, 2022), p. 150.

135 To be clear, much of the preceding discussion refers to legal involvement at the operational level, where planning occurs. There may have been legal review at the departmental level in developing employment guidance going back much further than the 1990s. See, *supra*, footnote 46.

136 James N. Miller, “Civil-Military Relations in Nuclear War Planning,” in *Managing Nuclear Operations in the 21st Century*, eds. Charles Glaser, Austin Long, and Brian Radzinsky (Washington, DC: Brookings Institute Press, 2022), pp. 71-93. The inclusion of LOAC compliance language in the document demonstrates, *ipso facto*, legal review. *Ibid.*, p. 85.

137 Glaser, Acton, and Fetter; Lieber and Press, p. 8. Both recommend relieving legal constraints.

138 Fetter and Glaser, p. 30; Lieber and Press, p. 12.

international law, the U.S. position is that reprisals are legally permissible.¹³⁹ To be clear with terminology, a “belligerent reprisal” is an act “taken against a party: (1) that would otherwise be unlawful: (2) in order to persuade that party to cease violating the law.” Further, the reprisal must be proportionate to the illegal act that prompted it.¹⁴⁰

This misunderstanding of the legality of belligerent reprisal appears to have the same source as the misunderstanding discussed above in relation to LOAC application generally—the 2021 article by Scott Sagan and Alan Weiner.¹⁴¹ In the article, the authors comment on a recent claim regarding the continued legality and relevance of belligerent reprisals to deterrence theory, but contend the doctrine is not available.¹⁴² Rather, they argue that in the years since ratification of AP I, customary international law crystalized to the point “that it is no longer legally permissible to make civilians the object of attack with nuclear (or other) weapons by way of reprisal.”¹⁴³ They next present a defense of this position which stimulated some back and forth in the correspondence pages of *International Security*.¹⁴⁴ It is important to note that the 2021 article is an item of scholarly advocacy and not, as the countervalue advocates apparently take it, a statement of U.S. law. U.S. law, including what the United States views as customary international law, is what controls U.S. nuclear strategy and plans, not the opinion of non-governmental policy advocates.

Reprisal therefore is a potentially available tool to deter an adversary, as hypothesized by countervalue advocates, that is not constrained by LOAC and who strikes “value” targets such as U.S. cities, population centers, and presumably civilian infrastructure.¹⁴⁵ There are limits. Reprisal might not be legally available to respond to a large-scale counterforce attack, which could comply with LOAC and would not be per se illegal even if the attacks caused extensive civilian harm. A large-scale

139 Jay Jackson and Kenneth “Daniel” Jones, “Ukraine Symposium—The Lawful Use of Nuclear Weapons” (April 26, 2022), <https://lieber.westpoint.edu/lawful-use-nuclear-weapons/>; Anthony J. Colangelo, “The Duty to Disobey Illegal Nuclear Strike Orders,” *Harvard National Security Journal* 9 (2018), p. 109, citing Stuart Casey-Maslen, “The Use of Nuclear Weapons as a Reprisal Under International Law,” in *Nuclear Weapons Under International Law*, eds. Gro Nystuen, Stuart Casey-Maslen, and Annie Gold Bersagel (2014), p. 190 (Colangelo cites Sagan and Weiner approvingly but disagrees with them on this point); *DOD Law of War Manual*, ¶ 18.18. Reprisals. While manuals, including law of war manuals, are not controlling authority and so only arguably relevant to determination of customary international law, the DOD Law of War Manual nevertheless remains an “authoritative statement of the DOD view of the law of war.” Charles J. Dunlap, “Practitioners and the Law of War Manual,” in *The United States Law of War Manual: Commentary and Critique*, ed. by Michael A. Newton (Cambridge, MA: Cambridge University Press 2018), p. 74.

140 *Law of War Manual*, ¶ 18.18.1. and ¶ 18.18.2.4. The requirement is that the reprisal be “proportional,” but in the context of reprisal—and not of attacks generally—this means proportionate to the offending act; however, determining whether a reprisal is proportional likely involves analysis very similar to proportionality analysis. See Michael N. Schmitt, “Ukraine Symposium—Reprisals in International Humanitarian Law” (March 6, 2023). <https://lieber.westpoint.edu/reprisals-international-humanitarian-law/>. Finally, reprisals are understood as a “last resort” to restore legal compliance. *Ibid.*

141 Sagan and Weiner, pp. 153-154.

142 *Ibid.*, p. 153, citing Richard, “Nuclear Weapons Targeting,” p. 867, 974.

143 *Ibid.*, pp. 153-154.

144 Christopher A. Ford, et al., “Correspondence: Are Belligerent Reprisals against Civilians Legal?” *International Security*, 46, no. 2 (Fall 2021): p. 166.

145 Fetter and Glaser, p. 29.

nuclear attack does not automatically open an adversary's citizens and society to nuclear reprisal. Rather, reprisals are limited to responding to unlawful attacks (such as indiscriminate or disproportional attacks), and the reprisal must be proportionate to the offending attack. To be sure, whether an attack is lawful or not for reprisal purposes may be in the eye of the beholder.

Two further points on reprisals and customary law should be addressed. The first point relates to the argument that because states have not conducted belligerent reprisals in recent conflicts, this demonstrates "state practice" sufficient to help establish the customary rule. There are a multitude of reasons why a State might eschew employing a belligerent reprisal even if otherwise entitled to do so: treaty constraint (i.e., the state is a party to AP I); fear of stimulating still worse enemy conduct; desire to maintain domestic or international support for the conflict, and so on. The U.S. response to the ICRC Customary International Humanitarian Law study rightly faults it for assuming a failure to violate a proposed rule means that states believe it to be customary law.¹⁴⁶ To reason otherwise leads to absurd results. For example, the argument that failure to attack a category of military objectives leads to a legal prohibition would incentivize attacks on those objectives to ensure a customary rule is not created.¹⁴⁷ This essentially turns international humanitarian law on its head and is a reminder that decisions made for policy reasons "should not be confused for law of war limitations."¹⁴⁸

The second point relates to the contention that, the customary rule having formed, the United States has failed to act as a persistent objector as required by international law.¹⁴⁹ It is not clear what more the United States should have done regarding its position on reprisals. As the authors concede, the United States argued its position on belligerent reprisals in the context of both AP I and the ICJ Advisory Opinion proceedings¹⁵⁰—the only two fora where the U.S. position was legally contended. It is worth noting that the ICJ passed on ruling on reprisals in its opinion.¹⁵¹ One of the basic reasons for nuclear weapons "is to deter others from unlawful use of weapons of mass destruction"¹⁵² by threat of reprisal, so the issue was before the court and material to its deliberations. Had the court—which did not

146 John B. Bellinger, III and William J. Haynes II, "A U.S. government response to the International Committee of the Red Cross study Customary International Humanitarian Law," *International Review of the Red Cross* 89, no. 866 (June 2007), p. 459.

147 Charles J. Dunlap, "Targeting Hearts and Minds: National Will and Other Legitimate Military Objectives of Modern War," in *International Humanitarian Law Facing New Challenges*, ed. Wolff Heintschel von Heinegg and Volker Epping (New York, NY: Springer, 2007), p. 118.

148 W. Hays Parks, "Asymmetries and the Identification of Legitimate Military Objectives," in *International Humanitarian Law Facing New Challenges*, eds. Wolff Heintschel von Heinegg and Volker Epping (New York, NY: Springer, 2007), p. 99.

149 Sagan and Weiner, pp. 158-159.

150 *Ibid.*, pp. 155, 158.

151 Michael J. Matheson, "The ICJ Opinion on Nuclear Weapons," *Transnational Law and Contemporary Problems* 7 (Fall 1997), p. 364.

152 *Ibid.*

shy away from taking up the hugely momentous and contentious issue of the legality of nuclear weapons—felt customary international law had formed regarding belligerent reprisals, it could have said so. The 25 years between the ICJ Advisory Opinion and the Sagan and Weiner article is a short period of time for customary international law to form. Over that period, the United States reiterated its objections to those elements of AP I it considers unreflective of customary international law (if not reprisal specifically)¹⁵³ and consistently asserted the reprisal rule in U.S. legal manuals.¹⁵⁴ Where specially affected states “lodged objections from the time the rule was first articulated; and that these States have made them consistently since then—clearly indicates that these. . . States are not simply persistent objectors, but rather that the rule has not formed in customary international law at all.”¹⁵⁵

Distinction and Nuclear Strategy

So, the first way out of LOAC inhibitions on counter-population targeting—reprisals—is available and would permit targeting civilians to stop, at least, indiscriminate attacks. The second way out postulated by the countervalue advocates is a “less restrictive understanding” related to “certain industrial and infrastructure targets acceptable under LOAC.”¹⁵⁶ This refers to targets such as oil refineries, electrical grids, and communication networks that are “civilian objects, but are also essential for military operations.” Attacks on such targets, they argue, despite a high degree of collateral damage, “could be justified in the pursuit of military objectives.”¹⁵⁷ This is correct. Attacks on such targets would be justified provided certain principles are followed. However, LOAC offers no assistance (beyond reprisals) for some of the more “seemingly brutal”¹⁵⁸ attacks or threats advanced by the countervalue advocates, such as “civilian infrastructure and populations,”¹⁵⁹ “society and infrastructure,” up to and including “large attacks that would result in societal

153 See, e.g., footnote 43 and 69, *supra*.

154 In their exchange with Chris Ford in on the legality of reprisal in *International Security*, Sagan and Weiner argue that Ford could only point to one manual, the then 10-year-old 2010 *Law of War Deskbook*, as a counterpoint to their argument that the Obama administration 2013 employment guidance effectively outlawed reprisal (*supra*, footnote 67). In fact, every subsequent edition of the *Law of War Deskbook* included the 2015 edition and multiple editions of the related *Operational Law Handbook* through 2020 (all post-2013 Employment Guidance) contain the same language regarding lawful belligerent reprisals. There is nothing inconsistent between the 2013 policy and reprisals. Neither the Obama nor any subsequent administration should be required to add the qualifier “except in the case of belligerent reprisals” every time it touts compliance with the legal obligation not to attack civilians. It is or should be understood.

155 Bellinger and Haynes, p. 457. Here the language is applied to a proposed rule regarding means and methods of war that may cause widespread, long-term, and severe damage to the environment. This was one of several exemplar objections the United States made to the customary international law study. In this author’s opinion, everything the United States said in response to this proposed rule could be cut and pasted into a response to a rule outlawing belligerent reprisal.

156 Fetter and Glaser, p. 30.

157 *Ibid*.

158 *Ibid.*, p. 34.

159 *Ibid*.

destruction,”¹⁶⁰ and “deliberately targeting enemy civilians” in “punitive retaliatory strikes against enemy cities.”¹⁶¹

Countervalue advocates contend the law unnecessarily restricts attacks against civilian objects that are essential for military operations (which means they are not civilian objects for LOAC purposes, but military objectives). They believe it would be difficult for such attacks to survive scrutiny under the LOAC principles of distinction and proportionality.¹⁶² They are correct to focus on these principles. Ultimately, legal compliance “comes down to the selection of targets and the construction of options.”¹⁶³ Selection of targets involves the principle of distinction and construction of options involves the principle of proportionality. Although their framing is correct, their conclusions are not.

Distinction and proportionality are mechanisms by which LOAC resolves tension between the principles of military necessity and humanity. “Military necessity” permits the use of “all measures necessary to defeat the enemy as quickly and as efficiently as possible that are not prohibited by the law of war.”¹⁶⁴ Importantly, in evaluating military necessity one may consider the broader imperatives of winning the war as quickly as possible; that is, in assessing military necessity one can consider the entire war strategy rather than only the potential tactical or operational gains from attacking a particular target.¹⁶⁵

The principle of distinction balances military necessity and humanity by limiting attacks to persons or objects that qualify as military objectives. Only military objectives may be attacked. Civilians and civilian objects may not be attacked. However, just as a civilian loses his or her protection if directly supporting hostilities, a civilian object ceases to be a civilian object when it supports or, in the U.S. view, sustains military action. A military objective is an object “which by its nature, location, purpose, or use makes an effective contribution to enemy action and whose total or partial destruction, capture, or neutralization, in the circumstances ruling at the time, offers a definite military advantage.”¹⁶⁶ A seemingly civilian object becomes a military objective if it meets this two-part test.

160 Glaser, Acton, and Fetter. Acton appears to have walked away from this targeting approach in a later article, advocating a conceptually lawful strategy targeting conventional military forces and military infrastructure. James Acton, *Two Myths about Counterforce*, *supra* footnote 45.

161 Lieber and Press, pp. 2, 9.

162 Fetter and Glaser, p. 30. The is implicit in Lieber and Press, p. 12. The Glaser, Acton, and Fetter article focuses on proportionality, advancing the argument addressed in the ethics discussion that a large-scale counterforce strike would not be functionally different than a countervalue/counter-population strike. As noted, *supra*, there are factual distinctions. The legal distinction is discussed *infra*.

163 Kehler, “Nuclear Weapons and Nuclear Planning,” p.58.

164 *Law of War Manual*, ¶ 2.2.

165 *Ibid.*, ¶ 2.2.3.1.

166 *Law of War Manual*, ¶ 5.6.3; AP I art. 52(2). The United States recognizes AP I art. 52(2) as a correct statement of customary international law. Richard, *Nuclear Weapons Targeting*, footnote 478, p. 944. .

Although the term is not so broad as to permit targeting an adversary's economy and infrastructure generally, the definition does encompass infrastructure and economic targets classifiable as war-supporting or war-sustaining. Such targets would include "ports and airfields and equipment that could be part of lines of communication; road networks and bridges; electrical power stations; and oil refining and distribution and objects associated with producing oil and lubricants."¹⁶⁷ Military objectives also include factories engaged in "the manufacture of arms, munitions, and military supplies;"¹⁶⁸ "works producing or developing military supplies and other supplies of military value, including metallurgical, engineering, chemical . . . and infrastructures supporting the war effort;"¹⁶⁹ and "communications installations used for military purposes, including broadcasting and television stations."¹⁷⁰

This is not an exhaustive list, and it is broad. Points of contention regarding the breadth of the rule relate to how directly the object must support military action and whether the definition is broad enough to include "war sustaining" objects. For example, Yoram Dinstein argues the U.S. position on including "war sustaining" goes too far. He argues that for an object to qualify as a military objective, there must be a "proximate nexus to military action (or 'war-fighting')." ¹⁷¹ The U.S. view is different. There must be some connection, or nexus, but it need not be proximate. "The connection of some objects to the enemy's war effort may be direct, indirect, or even discrete."¹⁷² Classification as a military objective depends on value to the enemy's war fighting or sustaining effort, including an object's ability to be converted, and "not solely its overt or present connection and use."¹⁷³ While the United States is in a clear minority in adopting such a broad view of military objective,¹⁷⁴ the U.S. view on war sustaining recently received more international support in connection with U.S. and allied strikes against oil facilities and tanker trucks financing ISIS activity and drug facilities financing Taliban activity.¹⁷⁵

Dinstein notes the difficulty in drawing the line between military and civilian industries. Civilian lines of production can swiftly be converted to military production

¹⁶⁷ *Law of War Manual*, ¶ 5.6.8.3 and ¶ 5.6.8.5, pp. 225-228 and citations therein.

¹⁶⁸ Yoram Dinstein, "Legitimate Military Objectives Under the Current Jus in Bello," *International Law Studies* 78, Legal and Ethical Lessons of NATO's Kosovo Campaign, ed. Andru E. Wall (2002), p. 147.

¹⁶⁹ Steven Haines, "The United Kingdom and Legitimate Military Objectives: Current Practice . . . and Future Trends?" *International Humanitarian Law Facing New Challenges*, Wolff Heintschel von Heinegg and Volker Epping, eds. (New York, NY: Springer, 2007), p. 134.

¹⁷⁰ *Ibid.*, p. 135.

¹⁷¹ Dinstein, pp. 145-146.

¹⁷² Parks, *Asymmetries*, p. 89.

¹⁷³ *Ibid.* See, also, *Law of War Manual*, ¶ 5.6.8.

¹⁷⁴ Ray Murphy, "Back to Basics: Core Law of War Principles," *The United States Law of War Manual: Commentary and Critique*, Michael A. Newton, ed. (Cambridge: Cambridge University Press, 2018), p. 137.

¹⁷⁵ Dunlap, *Practitioners and the Law of War Manual*, pp. 69-70.

and “subcontracting in the manufacture of components of modern weapon systems causes a dispersion in the fabrication of war materials that is almost impossible to trail.”¹⁷⁶ These are not new problems. The United States war machine in World War II was powered by civilian industrial conversion. Wars between nuclear powers will be fought, initially, with forces in being that will be swiftly depleted. Given the stakes likely involved in a great power conflict, the industry, infrastructure, and resources necessary to regenerate combat power and sustain military operations will, of course, be military objectives. Whether to attack such targets would be a strategic decision; the law is permissive enough.

Although Cold War instructions to develop attacks on the “general industrial capacity”¹⁷⁷ and the “industrial/economic base of the Soviet Union (and its allies)”¹⁷⁸ seem facially overbroad, the legality of such planning depends on the actual targets selected. The first question is whether the targets are valid military objectives. In reviewing the list of targets described as “war supporting” or “contributing to economic recovery” provided to the Senate Armed Services Committee in 1980, it is difficult to see what would be excluded as a military objective as the United States currently understands the term. War supporting: ammunition factories, tank and armored personal carrier factories, petroleum factories, railway yards, and repair factories. Economic recovery: coal, basic steel, basic aluminum, cement, and electric power.¹⁷⁹ The distinction between war-supporting and economic recovery may be thought of in terms of direct rather than indirect connection with the war effort,¹⁸⁰ or in terms of war supporting rather than sustaining. The differences are less a matter of legality than a matter of targeting priority.

An examination of Cold War Soviet economic targeting of the United States leads to a similar conclusion. The Soviet objective was not to create ruin but to “destroy strategic combat means, paralyze enemy military production . . . and sharply reduce the capability to conduct [nuclear] strikes.”¹⁸¹ While legality is determined by target selection (distinction) and weaponing (proportionality), it seems probable that targets supporting these objectives could be lawfully attacked. A more recent Department of Defense list of notional countervalue targets includes economic targets, speaking broadly of “industries, resources, and/or institutions contributing to

176 Ibid.

177 Presidential Directive (PD)-59. <https://fas.org/irp/offdocs/pd/index.html>. Accessed June 26, 2024.

178 NSDD-13, *supra*, footnote 26.

179 Richard, p. 933.

180 Ibid., p. 934.

181 Freedman and Michaels, p. 529.

the enemy's war effort.”¹⁸² This is even less legally troubling than either of the Cold War examples.¹⁸³

Hays Parks noted the debate over war-sustaining targets raised fundamental questions over the consistency of restrictive legal interpretations with the purpose of war—destroying not just the capability but the will to resist, which is permitted if done through attacking valid military objectives.¹⁸⁴ Parks cited approvingly language by Sir Michael Howard which would be familiar to any student of Thomas Schelling: war is part of a persuasive process, threat of destruction is a necessary part of that process, and “only exceptionally regarded as an end of itself.”¹⁸⁵ Following this logic, the use of nuclear weapons as a component of a war termination or escalation control strategy would meet the test of military necessity, provided other legal requirements are met.¹⁸⁶

Whether a particular object qualifies as a military objective may depend on the nature and scope of the war aims, which may themselves change over the course of the conflict.¹⁸⁷ In a nuclear context, the scope of the conflict may be existential. In deterrence terms, lawful military objectives—beyond simply military forces and command and control—offer a multitude of targets that an enemy may value. It is therefore difficult to see, beyond barring direct attacks on civilians, how LOAC should unduly restrict countervalue strategies. Countervalue advocates conclude otherwise owing, in part, to an excessively narrow concept of military objective. This is most evident in Lieber and Press, who mix the terms “military targets” with “military forces” as if they were synonymous and claim the United States pursues a “purely counterforce strategy.”¹⁸⁸ They read the U.S. commitment to “not intentionally target

182 U.S. Department of Defense, *Nuclear Matters Handbook* (Revised) (Washington, DC: Department of Defense, 2020), p. 14.

183 This is unsurprising in a DOD reference publication which certainly went through review by the Office of General Counsel. See discussion, *supra*, and at footnotes 58-59. What is most interesting about this list is the implicit assumption that a countervalue approach can be applied to lawful targets. There are all sorts of value targets that may be lawfully attacked, achieving powerful deterrent effects without deliberately targeting civilians.

184 Parks, *Asymmetries*, p. 97. Parks was specifically speaking to restrictive interpretation of AP I rules.

185 *Ibid.*, citing Sir Michael Howard, “Strategy and Policy in 20th Century Warfare,” Harmon Memorial Lecture in Military History 1959-1987 (1988), p. 354.

186 *DOD Law of War Manual* ¶ 5.4.6: “Force that May be Applied to Military Objectives: In the absence of expected harm to civilians and civilian objects or of wanton destruction that is not justified by military necessity, the law of war imposes no limit on the degree of force that may be directed against enemy military objectives. . . . the broader imperatives of winning the war may be considered, and overwhelming force may be used against enemy military objectives.” (Emphasis added and internal citations omitted.)

187 Final Report to the Prosecutor by the Committee Established to Review the NATO Bombing Campaign Against the Federal Republic of Yugoslavia (December 4, 1999), para. 37. <https://www.icty.org/en/press/final-report-prosecutor-committee-established-review-nato-bombing-campaign-against-federal>. Accessed June 26, 2024.

188 Lieber and Press, p. 6 (“As mentioned at the outset, the United States aims nuclear weapons solely at enemy military targets, not at their cities. In other words, the United States threatens to respond to any nuclear attack—even an unrestrained strike on U.S. cities—by retaliating against enemy military forces.” (emphasis added)).

civilian populations and objects” to mean the United States is restricted to attacking military forces,¹⁸⁹ which is simply not the case.

Proportionality and Nuclear Strategy

Identifying an object as a military objective is only the first part of the legal analysis and, with nuclear weapons, the easiest part. The attack must also be proportional, meaning without disproportionate collateral damage to civilians and civilian objects. Here, again, the legal principle is misapplied in countervalue advocacy so that lawful nuclear targets are very limited, perhaps only to military forces of similar destructive potential. For example, Fetter and Glaser explain that LOAC permits “certain counterforce attacks (attacks against nuclear forces and command and control, and possibly conventional forces).”¹⁹⁰ Elsewhere, they contend that the United States would be limited in responding to a countervalue attack (including cities) to retaliation “only against military forces.”¹⁹¹ Conventional military forces are unambiguously lawful targets. The uncertainty indicated by the word “possibly” suggests their concern is that nuclear attacks against conventional forces would likely fail the test of proportionality. To be clear, the first statement above (that LOAC permits attacks on military forces) is correct as far as it goes. But it does not go anywhere near as far as the law allows. Reading this statement together with the incorrect second statement (regarding limitations on responses to countervalue attacks) suggests a limitation not required by law.

Regarding proportionality, the DOD *Law of War Manual* states:

In war, incidental damage to the civilian population and civilian objects is unfortunate and tragic, but inevitable. Thus, applying the principle of proportionality in conducting attacks does not require that no incidental damage result from attacks. Rather, this principle creates obligations to refrain from attacks in which the expected harm incidental to such attacks would be excessive in relation to the concrete and direct military advantage anticipated to be gained and to take feasible precautions in planning and conducting attacks to reduce the risk of harm to civilians and other persons and objects protected from being made the object of attack.¹⁹²

Proportionality, then, depends on two variables, military advantage and incidental damage, and imposes a precaution requirement to reduce incidental damage. The rule can be difficult to apply owing to inherent difficulties in valuation between advantage

¹⁸⁹ Ibid.

¹⁹⁰ Fetter and Glaser, p. 25 (emphasis added). The authors acknowledge a risk of oversimplification for the sake of brevity.

¹⁹¹ Ibid., p. 29. This assumes, too, that reprisals are not permitted.

¹⁹² *Law of War Manual*, ¶ 2.4.1.2, internal citations omitted.

and incidental damage.¹⁹³ In determining excessiveness in proportionality analysis, both quantitative and qualitative factors can be considered, as, for example, the difference between killing three high-ranking officers rather than three low-ranking soldiers.¹⁹⁴ In the nuclear context, how does one assign value to destroying an ICBM silo? Or achieving a functional kill of a command-and-control node? Destroying a nuclear weapon system is presumably more advantageous than destroying an equivalent conventional system, but how much more?

A further complication is confusion over how to conduct the test. Proportionality is not a balancing test weighing expected damage caused against expected damage avoided, “with the slightest difference tipping the balance.”¹⁹⁵ Nor is the test a casualty counting exercise. It is mistaken to treat ‘proportional’ to mean ‘proportionate.’ ‘Extensive’ does not mean ‘excessive.’ ‘Even extensive civilian casualties may be acceptable, if they are not excessive in light of the concrete and direct military advantage anticipated.’”¹⁹⁶

Two examples from academics and policy advocates urging more restrictive nuclear guidance illustrate these conceptual errors. The first relates to equating “proportional” to “proportionate.” The argument is that counterforce attacks are permitted “when they prevent or significantly reduce the expected damage to the U.S. and allied population with less (i.e., proportionate) foreign collateral damage.”¹⁹⁷ A proportionate attack might be proportional, but proportionate is not the standard. Proportionality is not determined by balancing lives saved against lives lost. How can such a comparison be made? It may be possible to estimate collateral damage, but how can planners or commanders determine lives saved in this scenario? Also, surely, “proportionate” cannot require that the enemy takes less collateral damage. A second example focuses solely on collateral damage with no consideration of military advantage. The argument is that owing to warhead yield, U.S. ICBMs may be “the least compliant strategic delivery system with respect to the law of armed conflict.”¹⁹⁸ There is no discussion—at all—of the military advantage obtained from destroying Russian ICBMs and command nodes, which are the authors’ presumed target of U.S. ICBMs. Consideration only appears given to potential collateral damage. As such, the analysis considers only half the proportionality test.

193 Michael N. Schmitt, “Fault Lines in the Law of Attack,” *Testing the Boundaries of International Law*, Susan Breau and Agnieszka Jachec-Neale, eds., British Institute of International and Comparative Law (2006), p. 293.

194 International Law Association Study Group, “The Conduct of Hostilities and International Humanitarian Law: Challenges of 21st Century Warfare,” *International Law Studies* 93 (2017), p. 368.

195 Schmitt, p. 293.

196 Yoram Dinstein, *The Conduct of Hostilities Under the International Law of Armed Conflict* (Cambridge: Cambridge University Press, 2004), pp. 120-121 [discussing permissibility of bombing “an important army or naval installation (like a naval shipyard) where there are hundreds or even thousands of civilian employees” at risk].

197 Sagan and Weiner, p. 129.

198 George Perkovich and Pranay Vaddi, *Proportionate Deterrence*, p. 66.

It is impossible to determine proportionality without considering military advantage—and military advantage is everything that results from destroying the target. Advantage can accrue from eliminating the ability of a target to harm U.S. or allied civilians, yes. However, it can also accrue from eliminating the ability of a target to harm military forces or operations, to offer a means of resistance to tactical or operational plans, or even to the overall military strategy. Proportionality is best understood not as a standard of precision but rather as zone of decision delineating the outer boundaries of a commander's discretion¹⁹⁹ (in a nuclear context, the President's discretion), which compares expected harm and expected advantage. Beyond destruction of the target, the principle “balances military expediency and larger military interests (such as ensuring strategic or tactical victory, preserving the lives of friendly forces, and bringing the conflict to its swiftest conclusion) against humanitarian interests.”²⁰⁰ In assessing military advantage, the commander can look past tactical gains related to the individual attack, to the “full context of war strategy.”²⁰¹

Further, although military advantage cannot accrue from harm to civilian morale (and attacks cannot be conducted for this purpose), military advantage can accrue from harm to morale of enemy forces including, presumably, leadership.²⁰² The target must still be a military objective. Morale is attacked through lawful targets. Dunlap argues that owing to the “special political and psychological dimensions of nuclear weapons,” attacks effecting the “mental state of an adversary, degrading his morale, and eroding his will to continue the conflict can all constitute legitimate military objectives.”²⁰³ However, purely political or economic advantages are insufficient to satisfy the legal rule; there “must be a nexus to the conduct of hostilities.”²⁰⁴ The law, then, would support nuclear strikes designed to produce psychological effects related to the war strategy, and these intended effects could be considered to determine military advantage in assessing proportionality.

In the ICJ proceedings, the United States explained that nuclear weapons could be used proportionally, but this would depend on the nature of the enemy threat, the importance of destroying the objective, the nature and size of the nuclear blast, and

199 Michael A. Newton, “Reframing the Proportionality Principle,” *Vanderbilt Journal of International Law* 51, no. 3 (May 2018), pp. 868-869.

200 *Ibid.*, p. 872.

201 Richard, p. 973. Parks points to the deception campaign for the D-Day invasion to illustrate this point. The military advantage in striking targets in the Pas-de-Calais region had less to do with the targets themselves than in deceiving the Germans as to where the invasion would occur to divert German forces from Normandy. Parks, *Air War*, p. 176.

202 *Law of War Manual*, ¶ 5.6.7.3.

203 Dunlap, *Taming Shiva*, p. 163. Lewis and Sagan take issue with this argument, contending they “can find no meaningful distinction between ‘terrorizing’ noncombatants and the allegedly lawful objections of ‘affecting their mental state’ and ‘eroding their will to continue the conflict’ other than a rhetorical one.” Lewis and Sagan, p. 66. They should look harder. There is an enormous difference between attacks intended to influence the calculus of decisionmakers by demonstrating they cannot achieve their war aims at a tolerable cost and those designed to terrorize civilians.

204 Schmitt, p. 295.

the magnitude of risk to civilians.²⁰⁵ “Importance” is a difficult thing to measure. Presumably, nuclear targets must be very important given the potential for significant collateral damage related to strikes in urban locations or associated with large-scale attacks. However, proportionality is not a formula whereby “x” (lives saved) must be greater than “y” (lives lost). This may be impossible to know. The principle, as applied, must be practical or it will be ignored. Rules “that are incompatible with all effective military action risk being ignored and, thereby, not preventing any harm from occurring.”²⁰⁶ Michael Schmitt encapsulates this logic succinctly:

In fact, the test is one of “excessiveness.” The rule only bans attacks in which there is no proportionality at all between the ends sought and the expected harm to civilians and civilian objects. The Rome Statute’s addition of the adjective “clearly” to “excessive” in its articulation of the proportionality rule (as a war crime standard) reflects this interpretation. Focusing on excessiveness avoids the legal fiction that collateral damage, incidental injury, and military advantage can be precisely measured. Ultimately, the issue is reasonableness in light of the circumstances prevailing at the time . . . and nothing more.²⁰⁷

What makes proportionality analysis difficult is that here Bernard Brodie’s second twin fact of the atomic bomb—that its destructive power is fantastically great²⁰⁸—intrudes and complicates matters. There is no question that the consequences of nuclear use—in particular large-scale attacks—would be devastating, potentially outside the bounds of previous human experience. But that is not to say the proportionality test can never be satisfied, only that the military advantage gained from a nuclear attack must be correspondingly large.

A final issue related to proportionality concerns the principle of precaution. Briefly, the principle of precaution is a mechanism to reduce collateral damage by ensuring only military objectives are attacked and that they are attacked in a manner to minimize risk to civilians by adjusting such factors as time, location, warning, and attack structure.²⁰⁹ The AP I standard, which the United States recognizes as customary international law, is to take “feasible” precautions.²¹⁰ Not every possible precaution. Crucially, in assessing feasibility, the law looks beyond only those

205 Richard, p. 950.

206 Newton, p. 873, citing Janina Dill and Henry Shue, “Limiting the Killing in War: Military Necessity and the St. Petersburg Assumption,” *Ethics & International Affairs* 26 (2012), p. 324.

207 Schmitt, p. 293 (internal citation omitted).

208 Freedman and Michaels, *supra* footnote 5.

209 *Law of War Manual*, ¶ 5.11.

210 *Ibid.* See also footnote 385 at p. 259; Addition Protocol I, art. 57(2).

variables impacting the enemy. The requirement is inherently variable and context dependent, contingent on such factors as environment of the attack, time, terrain, weather, and capabilities available.²¹¹

Precaution in the first dimension, target selection, should not be an issue in nuclear planning, which relies primarily on pre-planned options (the principle takes on more weight in adaptive planning scenarios). It is in the second dimension, target prosecution, that error creeps into precaution analysis regarding nuclear employment. The error concerns various means available to support this principle related to nuclear weapons and nuclear effects. Discussing these means in representing the U.S. position before the ICJ, Michael Matheson explained that nuclear weapons could be used discriminately owing to precision and tailored effects such as adjusting yield, offset targeting, and height of burst.²¹² Dunlap, writing shortly after the ICJ Advisory Opinion, noted similar tools that were helpful to LOAC compliance.²¹³

Some commentators appear to mistake these tools for legal requirements. One example is the argument that “legal obligations under the precautionary principle mean the United States must use conventional weapons or the lowest yield nuclear weapons possible in any attack against legitimate targets.”²¹⁴ One expert-practitioner observes that “nuclear weapon use would almost always be difficult to defend legally if conventional military means could accomplish the same mission.”²¹⁵ Jeffrey Lewis and Scott Sagan take this argument to its logical conclusion in an advocacy piece promoting a “nuclear necessity principle” that would require the United States to use conventional weapons instead of nuclear weapons if there is “a reasonable probability of success.”²¹⁶ Success meaning success in destroying the target. This points to a second error, that of equating compliance with effectiveness, with precaution demanding a less destructive option if the more violent option is not certain to succeed. Thus, it is argued that “if the United States is unable to destroy Russia’s ability to conduct further nuclear attacks, it should choose a more limited response aimed at restoring deterrence.”²¹⁷

The error in these analyses is that the effect on the target, including incidental damage, is not the only consideration that factors into precaution. The use of the word “mission” in one of the statements above is important and points to other criteria. Precaution analysis must also consider factors related to friendly forces

211 *Conduct of Hostilities Study Group Report*, p. 374.

212 Richard, p. 950.

213 Dunlap, *Taming Shiva*, p. 161.

214 Sagan and Weiner, p. 129.

215 Highsmith, *supra* footnote 52, 53. Highsmith acknowledges this is a factual determination not a per se rule. *Ibid.*, p. 72, footnote 14. Highsmith’s formulation may be correct depending on how one reads the term “mission.” See discussion, *infra*. It is included here as it facially supports the conventional substitution argument.

216 Lewis and Sagan, pp. 62, 71.

217 Sagan and Weiner, p. 151.

and operations and other relevant circumstances, “including the effect of taking the precaution on mission accomplishment.”²¹⁸ The mission may not be merely destruction of the target, but destruction within a certain amount of time, or to a high level of certainty, or as part of an attack on a system of similar targets. The assessment is multi-dimensional and includes the risks to friendly forces, the number of weapons in the inventory, the future demands for these weapons, how long resupply might take (if possible), and the availability of reasonable alternative attack options.²¹⁹ The preference for escalation control over counterforce expressed in the previous paragraph reflects a strategy preference; it is not required by the principle of precaution. That some commenters prefer escalation control over damage limitation is interesting, but of no legal consequence.

Here is a practical example: A state wishes to destroy an air base hosting nuclear-capable bombers. It may be possible to reliably destroy the base with conventional weapons, but a conventional attack may require marshalling significant assets tasked to other missions and fighting through air and missile defenses. Time may be of the essence, so a warning—or a less prompt—contested conventional attack might defeat the purpose of the attack by triggering dispersal. Cratering and other damage caused by conventional weapons may be repaired far more quickly than damage inflicted by nuclear weapons. Circumstances may be such that although a nuclear attack may not guarantee success, it offers the best possibility of success. Among nuclear options, perhaps lower-yield weapons are needed for other current or future targets, perhaps the risk to enemy civilians is greater in those other targets, perhaps a lower yield option is not certain to penetrate to the target, or perhaps the lower yield option cannot be utilized without risking loss of the platform. How hard a target is, with respect to its ability to survive kinetic damage, is just one of many considerations in terms of deciding between conventional and nuclear options or between nuclear options. In support of the precautionary principle, it may be feasible to utilize some of the tools referenced above to reduce collateral damage (e.g., yield, height of burst), and maybe even all. Or maybe a conventional option meets mission requirements. But possibly not, and there is “no absolute requirement to do everything possible.”²²⁰

To conclude the point, the question of adopting a highly restrictive view of the precautionary principle is a question of should, not must. There may be all sorts of reasons, beyond humanitarian considerations, to take as many precautionary pains as possible—perhaps even to the point of decrementing mission objectives. Restraint may be that politically or strategically important. In a conventional conflict, demonstrable restraint may be necessary to maintain indigenous support for counterinsurgency operations, for example. Likewise, in a nuclear conflict,

218 *Law of War Manual*, ¶ 5.2.3.2. As the footnote to the rule points out, this was a position of a number of countries during the AP I negotiations. *Ibid.*, footnote 49.

219 Schmitt, p. 305.

220 International Law Association Study Group, p. 374; Schmitt, p. 305, footnote 96, speaking to arguments of a duty to use precision weapons if available.

demonstrable restraint may be integral to an escalation control strike. But, again, policy and strategy choices do not create legal obligations. The purpose of violence in war is to achieve the purposes of the war as quickly and efficiently as possible, tempered by the principle of humanity. Just as the principle of proportionality balances these broader concerns, the principle of precaution balances civilian protection and mission requirements. “The law of war is not a suicide pact. It does not require that an attacker employ the most discriminate force available to him.”²²¹

Escalation, Proportionality, and the Law of War

Legal analysis of nuclear employment should be relatively straightforward. Is the target a military objective? Is the attack proportional? But whether reviewing nuclear employment through the just war lens or under the law that descends from it, the specter of escalation casts its shadow over the analysis. In a nuclear peer or near-peer context, any nuclear attack—however restrained in design or intent—risks triggering a spiraling series of escalation terminating in massive nuclear exchanges where concepts such as distinction and proportionality seem inadequate. Newell Highsmith warns that nuclear escalation and de-escalation strategies would “likely prove messier in reality than in planning” and provide no “basis for confidence that nuclear escalation would not result in a nuclear holocaust.”²²² Ted Richard notes that there is no practical meaning to legal restraints if “the end of civilization” is in play.²²³

Both the Bishops’ Letter and the ICJ Advisory Opinion illustrate the conceptual difficulty created by escalation concerns. The Bishops’ Letter quotes Pope John Paul II’s statement that “for the first time it is possible to cause damage on such a catastrophic scale as to wipe out a large part of civilization and to endanger its very survival.”²²⁴ In a similar vein, the ICJ notes that nuclear weapons “have the potential to destroy all civilization and the entire ecosystem of the planet.”²²⁵ Concerns over the potentially apocalyptic consequences of nuclear weapons made it nearly impossible for either the bishops or the ICJ to examine the use of nuclear weapons as weapons (as opposed to “instruments of the wrath of God”) subject to moral or legal rules regulating their use, although they agreed that nuclear weapons should be subject to such rules.

The scale of actual and potential destruction resulting from nuclear warfare bedevils practitioners as well. General Kehler commented that Michael Walzer’s observation that nuclear weapons “are simply not encompassable within the familiar moral world” might apply with similar force regarding the legal world of conventional

221 Parks, *Air War*, p. 54.

222 Highsmith, p. 55.

223 Richard, *Nuclear War Planning*, p. 916.

224 Bishops’ Letter, para. 103.

225 ICJ Advisory Opinion, p. 21.

war, given the risks associated with collateral nuclear effects.²²⁶ Richard wrote that the “actual role of the law of war relating to nuclear weapons remains at an extraordinary level of abstraction,” suggesting the Law of War Manual comment that a “very significant military advantage would be necessary to justify the collateral death or injury to thousands of civilians”²²⁷ is not particularly helpful in legal analysis. Compound this problem with tens, scores, or even hundreds of attacks. Highsmith noted the difficulty of imagining nuclear use without “grave humanitarian consequences,” owing in part to risk that even a limited use of nuclear weapons carries the risk of escalation.²²⁸

What the bishops, the ICJ, and the practitioner-experts are struggling with is that the consequences of escalation from one or several nuclear weapons to a large-scale nuclear exchange are so devastating the legal analysis escapes the *jus in bello* framework and takes the discussion back to *jus ad bellum* considerations. The question becomes not about what target is attacked or how it is attacked, but about what value or interest is so compelling that it justifies initiating a nuclear war. As in just war doctrine, the legal principle of proportionality applies both to the resort to war and to the means and methods of war. Regarding the former, the “proportionality of the measures taken in self-defense is to be judged according to the nature of the threat being addressed.”²²⁹ The nature of the threat, not the weapon used by the threat.

Unless that weapon is nuclear. Nuclear use is seen to instantly change the nature of the threat²³⁰ and that effect is driven not by the impact of a particular weapon on a particular target but by fears of escalation. This dynamic suggests that in analyzing first use of a nuclear weapon in a conflict, even an ongoing conflict, the proper framework for analysis might be *jus ad bellum* rather than *jus in bello*. U.S. nuclear declaratory policy reflects this framing, committing the United States to “only consider the use of nuclear weapons in extreme circumstances to defend the vital interests of the United States or its Allies and partners.”²³¹

To illustrate this conceptual shift, consider three scenarios. In an ongoing conventional conflict, the United States is considering nuclear use in response to the adversary either (a) launching a conventional attack threatening a significant operational defeat, (b) employing chemical or biological weapons, or (c) employing nuclear weapons. Regarding a U.S. nuclear response, the legal issue is a *jus in bello* question of whether the United States is striking a lawful target proportionally. But in the first two scenarios, the more pressing questions are likely political and moral. In

226 Kehler, *Commanding Nuclear Forces*, p. 150.

227 Richard, p. 975, citing *Law of War Manual*, ¶ 5.12.3.

228 Highsmith, pp. 4-5.

229 *Law of War Manual*, ¶ 1.11.1.2.

230 This is seen in NATO statements regarding Russia nuclear use and in U.S. declaratory policy towards North Korea.

231 Department of Defense, 2022 *Nuclear Posture Review*, p. 9.

the political dimension, does the scenario entail extreme circumstances sufficient to justify crossing the nuclear threshold? In the moral dimension, do the stakes justify escalation risks (and the attendant destruction if escalation occurs)? This is another way of asking the *jus ad bellum* question of whether nuclear measures are justified by the threat. That the adversary crossed the nuclear threshold first should not matter in determining whether nuclear employment is legal or, more accurately, justifiable. But it seems to.

This *jus ad bellum* framing is in effect where the Bishops' Letter landed in finding first use of a nuclear weapon to be morally unjustified (conceived as response to conventional aggression).²³² The bishops were not analyzing the use of one or even dozens of weapons in an ongoing conflict, but rather "transgressing a fragile barrier—political, psychological, and moral—which has been constructed since 1945."²³³ That is, they were struggling with the issue of initiating a nuclear war. In their view, no potential good outweighed the potential evil of uncontrolled escalation. The ICJ landed in a similar place. While the court did not rule against the legality of nuclear weapons in any circumstance, it declined to rule that limited, discriminate strikes might be legal, in part because no state had satisfactorily articulated "whether such limited use would not tend to escalate into the all-out use of high-yield nuclear weapons."²³⁴ Ultimately, the court opined that nuclear weapon use might be acceptable in cases of extreme self-defense, in which the survival of the State may be at risk—a *jus ad bellum* determination.²³⁵

Neither the bishops nor the court could consider the *jus in bello* issues through to a useful conclusion. The risk of escalation dominated, distorted, and ultimately truncated their analysis. Their conclusions tell us almost nothing about how a nuclear weapon could be rightly employed once it is determined that escalation to nuclear war might be moral or lawful. Consequently, the Bishops' Letter and the ICJ Advisory Opinion, while useful touchstones in shaping nuclear declaratory policy, offer little help in analyzing nuclear employment in a conflict (beyond, of course, reinforcing that counterpopulation targeting is unambiguously immoral and illegal).

Conclusion

The rule is easy to state. "The law of war governs the use of nuclear weapons, just as it governs the use of conventional weapons."²³⁶ Yet, as the comments by Richard, Highsmith, and General Kehler indicate, with nuclear weapons, legal rules may be easier to state than to apply. That the consequences of a nuclear attack may not be

232 Bishops' Letter, para. 153. This is not to say U.S. declaratory policy reflects the Bishop's conclusions, only that both the letter and U.S. declaratory policy are focused on the legitimacy of initiating or participating in nuclear war.

233 Ibid.

234 ICJ Advisory Opinion, pp. 40-41.

235 Ibid., p. 41.

236 *Law of War Manual*, ¶ 6.18, citing, inter alia, the U.S. government statement to the International Court of Justice in 1995.

excessive to the military advantage gained or, more broadly—that the consequences of initiating a nuclear war may be preferable to the costs of losing a great power war²³⁷—do not make those consequences any less severe or catastrophic.

The question becomes what to do about it. Because legal clarity is preferable to legal confusion, one answer might be to conduct a focused examination of how LOAC does or should apply to nuclear weapons, as suggested by several experts in advance of the Trump administration's Nuclear Posture Review²³⁸ and as is implicit in the Sagan and Weiner, and Lewis and Sagan policy proposals. It may be that an inquiry into how to best apply targeting law to nuclear weapons relates more to policy than to law. But the inquiry and debate would keep these issues under scrutiny, improve application of LOAC as practitioners build understanding and expertise, and, as any discussion involving the unique characteristics of nuclear weapons inevitably does, improve rather than detract from deterrence.

Such an examination, however, is likely to impact the contemporary strategic debate only at the margins. Properly understood, beyond barring counterpopulation strategies, compliance with LOAC presents no barrier to effective deterrence strategy. The rules are not so narrow, not so constraining that nuclear attacks are effectively restricted to nuclear weapons and control systems, as some commenters suggest. The principle of distinction is broad enough and the principle of proportionality is flexible enough to permit attacks on a range of value targets supporting countervalue and backstopping counterforce strategies. There is no need to target civilians. At the same time, the principles of distinction and proportionality are not so toothless that counterforce strategies are indistinguishable from counterpopulation strategies in execution. Legal compliance can reduce civilian harm. Certainly, the law cannot be both so restrictive as to inhibit effective deterrent threats and so unconstrained as to be functionally without effect.

That the United States will comply with LOAC and that its opponents may not are elements of the security environment that should factor into strategy development. The countervalue versus counterforce debate should be settled on the merits of the competing strategies without attempting to invoke LOAC to put a thumb on the scale. Between the strategic approaches, LOAC is dispositive only regarding those elements of countervalue strategies that intentionally target civilians and civilian objects. If that restriction in fact impedes effective deterrence strategy, then that is just where we are as a nation. The United States cannot ratify the patently illegal conduct common among our post-Cold War adversaries by setting aside those elements of LOAC we find inconvenient, even for nuclear deterrence purposes. Whatever the additional costs of nuclear tri-polarity, they do not outweigh the costs of abandoning our values.

237 Michael Quinlan, *Thinking About Nuclear Weapons: Principles Problems, Prospects* (Oxford: Oxford University Press, 2009), p. 47. Quinlan makes that point that the proper test for *jus ad bellum* proportionality is “not of before or after [war] but of alternate prospects—the future if we go to war and the future if we do not.”

238 Lt. Col. Ted Richard and Sean Watts, “The International Legal Environment for Nuclear Deterrence” (March 27, 2017). <https://www.justsecurity.org/39281/international-legal-environment-nuclear-deterrence/>. Accessed June 26, 2024.

Rethinking Counterforce in the 21st Century Context

Damage Limitation in the 21st Century

Austin Long²³⁹

But it is necessary now to make a choice, to choose between two admittedly regrettable, but nevertheless distinguishable, postwar environments: one where you got twenty million people killed, and the other where you got a hundred and fifty million people killed.... Mr. President, I'm not saying we wouldn't get our hair mussed. But I do say no more than 10 to 20 million killed, tops. Uh, depending on the breaks.

—General Buck Turgidson, in *Dr. Strangelove: Or How I Learned to Stop Worrying and Love the Bomb* (1964)

Damage limitation has been a central element of U.S. nuclear strategy almost from the beginning of the nuclear age. There are two reasons for this centrality. The first is moral—saving millions of U.S. and Allied lives is an imperative even, and perhaps especially, in what would be the most extreme circumstances in human history. The second is strategic and operational—the ability to eliminate some portion of an adversary's ability to harm makes the threat to escalate more credible. This essay first defines damage limitation and then lays out the historical logic and feasibility of damage limitation through the Cold War. It then turns to the logic and feasibility in the 21st century. It concludes with a brief discussion of the risks of the pursuit of damage limitation.

Any discussion of damage limitation and nuclear strategy inevitably begins to trend towards the slightly surreal and macabre, with proponents sounding a bit like the fictional and buffoonish General Turgidson of *Dr. Strangelove*. This reality makes it difficult to have serious public discourse about damage limitation, as it is easily dismissed as chimerical if not crazy.²⁴⁰ Yet *Dr. Strangelove* retains its enduring relevance because it captured and reflected—albeit in a funhouse mirror way—many essential truths about nuclear strategy. The Soviets, for example, built a sort of Doomsday Machine known as Perimetr or “the Dead Hand,” which remains in service in Russia.²⁴¹ Similarly, Turgidson's views as the fictional Chairman of the Joint Chiefs

239 The views expressed here are his own and do not represent the views or policy of the Joint Staff, the Department of Defense, or any other entity. This chapter is dedicated to the memory of Owen R. Coté (1960-2024), whose research and mentorship was a critical inspiration.

240 Though during the Cold War those proponents often did themselves few favors rhetorically, as demonstrated by Reagan administration official Thomas K. “TK” Jones. See Robert Scheer, “Shoveling to Victory,” *The Guardian* (November 6, 1982).

241 See David E. Hoffman, *The Dead Hand: The Untold Story of the Cold War Arms Race and its Dangerous Legacy* (New York, NY: Doubleday, 2009). The existence of Perimetr and its continued use in the Russian Federation is confirmed in the document released by the Defense Intelligence Agency, *Russia Military Power: Building a Military to Support Great Power Aspirations* (2017), pp. 26-27.

of Staff cartoonishly reflect some of the actual contemporary views of the Joint Chiefs of Staff. It is best then to acknowledge upfront the Strangelovian aspect of the argument that follows, while noting that in no way obviates its seriousness.

Defining Damage Limitation

The epigraph opening this chapter underscores the challenge of defining damage limitation in the nuclear context. Even a relatively small number of high yield nuclear weapons targeted on urban-industrial targets can inflict enormous damage. Surely only incredibly high confidence in the near-perfect ability to eliminate or defeat adversary nuclear weapons would be sufficient to affect the political calculus of leaders.

Yet at the same time, Adam Smith's observation that "there is a great deal of ruin in a nation" has held true in modern industrial warfare. While exact figures are disputed, the Soviet Union suffered enormous losses in World War II—roughly a quarter of its population was killed or wounded. Nonetheless, it prevailed and was able to dominate much of Eurasia and project global influence for another 40 years.

It is thus difficult to define, *ex ante*, what constitutes fatal or even unacceptable damage to a nation state. Turgidson's "hair mussed" level of damage would have equated to 5-10% of the U.S. population in 1964—unthinkable on one level and yet plausibly survivable. While no leader would risk such losses in a cavalier way, in extreme circumstances when stakes are high they might assess whether the risk of such losses outweighed the alternative, such as national defeat and subjugation.

For a nuclear planner confronted with the need to actually target to inflict unacceptable damage, the potential resilience of an adversary makes calculations inherently conservative yet at the same time concrete. One cannot target nuclear weapons abstractly and thus planners must develop criteria for unacceptable damage that equates to a number of targets. If planners assess that they cannot strike the requisite number of targets after being struck by an adversary attack, they would have to inform political leaders that, in effect, they could not assure destruction. While political leaders might reach different conclusions, such an assessment by nuclear planners would call in to question the logic of mutually assured destruction.

For purposes of this analysis, damage limitation is defined as the ability to deny an adversary the ability to inflict unacceptable damage as defined by the adversary. This threshold is important as it would weigh on adversary willingness to run escalation risks. If mutually assured destruction is not in fact assured to one side of a crisis (or believed not to be assured), then the two sides in a crisis are not playing a game of "Chicken," to use Thomas Schelling's metaphor.²⁴² Or more accurately, they are playing Chicken where one side is driving a large tractor-trailer truck and the other is driving a compact car. Both sides, should they choose escalation, will face enormous

242 Thomas Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960).

costs, but of significantly different implications.²⁴³ In short, the side with damage limitation capabilities could emerge brutalized but viable as a society while the other ceases to exist.

While this may seem a fairly abstract definition of damage limitation—denying the adversary the perceived ability to inflict a specific analytically derived threshold of damage—it has empirical precedent. In the late Cold War, the Soviet military-industrial leadership had analytically derived a threshold for unacceptable damage that required striking 200 targets.²⁴⁴ As discussed later, the perceived inability of the Soviet Union to assure this level of retaliation appears to have had significant political consequences.

Damage Limitation and Extended Deterrence in Historical Perspective

Holding at risk the adversary's (i.e., Soviet) nuclear forces for damage limitation was of paramount importance to the United States from almost the time of creation of such forces.²⁴⁵ This required not just robust nuclear delivery systems, but also intelligence on the existence and location of adversary systems. The United States invested heavily in both delivery systems and intelligence, and during the period from the 1950s to at least the early 1960s seems to have clearly had the ability to find and destroy the vast bulk of Soviet long-range nuclear forces.²⁴⁶

In a 1959 meeting of the National Security Council, Chairman of the Joint Chiefs of Staff Nathan Twining noted the robustness of U.S. damage limitation. He stated that the Joint Chiefs “had war-gamed a general war against the Sino-Soviet Bloc three times and in each case the U.S. had managed to survive despite the fact that so many people nowadays argue that the U.S. and the U.S.S.R. each has the power to destroy the other in the event of general war between them.” President Eisenhower commented in the same meeting “that we ought to be clear among ourselves that if we are going to hit the Soviet Union, we are going in the process to remove the threat posed by the Soviet Union.”²⁴⁷

243 For a robust game theoretical treatment of this logic, see Benjamin Bahney and Braden Soper “Strategic Deterrence and Crisis Bargaining in 21st Century Competition,” working paper (2020).

244 Vitalii Kataev, “Mobile Missile Basing” (translated from Russian by author), *Vitalii Leonidovich Kataev Papers*, Hoover Institution Archive, Stanford University, cited in Brendan Rittenhouse Green and Austin Long, “The MAD Who Wasn’t There: Soviet Reactions to the Late Cold War Nuclear Balance,” *Security Studies* 26, no. 4 (2017), op. 631–636. The memorandum is from the electronic files portion of the collection. It is undated but based on context is from the late 1980s or early 1990s.

245 See for example David Alan Rosenberg and W. B. Moore, “‘Smoking Radiating Ruin at the End of Two Hours’: Documents on American Plans for Nuclear War with the Soviet Union, 1954–55,” *International Security* 6, no. 3 (Winter 1981–1982), and Edward Kaplan, *To Kill Nations: American Strategy in the Air-Atomic Age and the Rise of Mutually Assured Destruction* (Ithaca, NY: Cornell University Press, 2015), chapter 4.

246 Brendan Rittenhouse Green and Austin Long, “Stalking the Secure Second Strike: Intelligence, Counterforce, and Nuclear Strategy,” *Journal of Strategic Studies* 38, No. 1–2 (2015).

247 “Memorandum of Discussion at the 394th Meeting of the National Security Council,” in *Foreign Relations of the United States (FRUS), 1958–1960*, National Security Policy; *Arms Control and Disarmament*, vol III, doc 47.

The Kennedy administration enjoyed a similarly robust damage limitation capability, as reflected in internal deliberations before, during, and after the Berlin and Cuban crises.²⁴⁸ From a historical perspective, U.S. damage limitation capability during the Cuban Missile Crisis is admirably summarized by the authors of the now declassified *History of the Strategic Arms Competition*:

[T]he Soviet strategic situation in 1962 might thus have been judged little short of desperate. A well-timed U.S. first strike, employing then-available ICBM [intercontinental ballistic missile] and SLBM [submarine-launched ballistic missile] forces as well as bombers, could have seemed threatening to the survival of most of the Soviet Union's own intercontinental strategic forces. Furthermore, there was the distinct, if small, probability that such an attack could have denied the Soviet Union the ability to inflict any significant retaliatory damage upon the United States.²⁴⁹

Yet the mere capability for damage limitation does little to demonstrate why it was seen as important. This requires taking a step back to put nuclear strategy into the context of U.S. grand strategy in the early Cold War. The fundamental problem for grand strategy was how to prevent the Soviet Union from dominating Europe and therefore the vast bulk of world industrial and economic power.²⁵⁰ This required ensuring the freedom and relative unity of Western Europe in the face of the twin challenges posed by the Soviet threat and “the German question” that had vexed Europe since the 1870s.

U.S. grand strategy acknowledged that addressing these challenges would be expensive but sought to limit the costs. Both Truman and Eisenhower sought to rebuild a united Western Europe to counterbalance the Soviet threat with what would at least ultimately be a minimal U.S. presence. For Eisenhower, this flowed naturally from his political and especially economic conservatism. Yet the “New Frontiersmen” of the Kennedy administration were no less concerned about the economic aspects of

248 For a fuller accounting of Kennedy administration views of damage limitation and preemption, see Brendan Rittenhouse Green and Austin Long, “In Response to ‘How to Think About Nuclear Crises,’” *Texas National Security Review* 2, no. 4 (October 2019); Marc Trachtenberg, *A Constructed Peace: The Making of the European Settlement, 1945-1963* (Princeton, NJ: Princeton University Press, 1999), Chapter 8; and Francis J. Gavin, *Nuclear Statecraft: History and Strategy in America's Atomic Age* (Ithaca, NY: Cornell University Press, 2012), Chapter 2–3.

249 Ernest R. May, John D. Steinbruner, and Thomas M. Wolfe, *History of the Strategic Arms Competition 1945–1972*, v. 1 (Washington, DC: Government Printing Office, 1981), p. 475.

250 See John Lewis Gaddis, *Strategies of Containment: A Critical Appraisal of American National Security Policy during the Cold War* (Oxford: Oxford University Press, 2005), rev. and expanded ed.

commitment and both Kennedy and Johnson explored substantial withdrawal of U.S. troops from Europe.²⁵¹

The pithy description of the role of the North Atlantic Treaty Organization (NATO) as “keeping the Russians out, the Americans in, and the Germans down” accurately—if somewhat simplistically—describes the balancing act of U.S. grand strategy in the early Cold War. The German question was at least as important as the Soviet threat and the attempt to create a “third pillar” out of Western Europe that would balance the Soviets without substantial U.S. presence foundered on Germany. The United States could not get European support to satisfactorily rearm West Germany without the presence of the U.S. as a guarantor of its good behavior. This guarantee was as important to others in Western Europe as it was to the Soviets.

If Europe and West Germany were so important, why did cost matter? Would the United States not “bear any burden” to defend it? The United States was the preeminent economy of the time and had a burgeoning population, readily capable of fielding a military that would have overmatched the Soviet Union in conventional arms. Yet it did not, because as Aaron Friedberg has described, to do so would have required it to become a mirror of Soviet political economy.²⁵² The U.S. political economy had a core anti-statist ethos that, while weakened by the exigencies of the Cold War, put limits on resource extraction.²⁵³ Proposals for universal military training were quashed, though a peacetime selective service draft was enacted.²⁵⁴ Expenditures on defense went up to historically very high peacetime levels before declining, but never reached the massive extraction (as a percentage of gross domestic product) of World War II.²⁵⁵ Though there was flirtation with extensive economic controls that culminated in Truman’s brief nationalization of the steel industry, the maximalist vision of a “garrison state” described by Harold Lasswell never came to fruition.²⁵⁶

251 This account draws principally on Trachtenberg, *A Constructed Peace*; Aaron Friedberg, *In the Shadow of the Garrison State: America’s Anti-Statism and Its Cold War Grand Strategy* (Princeton, NJ: Princeton University Press, 2000); James McAllister, *No Exit: American and the German Problem, 1943-1954* (Ithaca, NY: Cornell University Press, 2002); and Francis Gavin, *Gold, Dollars, and Power: The Politics of International Monetary Relations, 1958-1971* (Chapel Hill, NC: University of North Carolina Press, 2004).

252 Friedberg, *In the Shadow of the Garrison State*, and Aaron Friedberg, “Why Didn’t the United States become a Garrison State?” *International Security* 16, no. 4 (Spring 1992).

253 See also Arthur Stein, “Domestic Constraints, Extended Deterrence, and the Incoherence of Grand Strategy,” in Richard Rosecrance and Arthur Stein, eds., *The Domestic Bases of Grand Strategy* (Ithaca, NY: Cornell University Press, 1993).

254 See Harold Lasswell, “The Garrison State,” *American Journal of Sociology* 46, no. 4 (January 1941) and the special issue *Annals of the American Academy of Political and Social Science* 241, “Universal Military Training and National Security” (September 1945) for debates contemporary to Lasswell. For an overview of the emergence of the Cold War-standing Army, see Mark Grandstaff, “Making the Military American: Advertising, Reform, and the Demise of an Antistanding Military Tradition,” *The Journal of Military History* 60, no. 2 (April 1996) and Friedberg, *In the Shadow of the Garrison State*.

255 The peak of Cold War defense spending as percentage of gross domestic product was in fiscal year 1953, at 14.3% of gross domestic product. The peak during World War II was about 42%. See Under Secretary of Defense (Comptroller), *National Defense Budget Estimates for FY 2007*, (Washington, DC: Department of Defense, 2006).

256 See Melvyn P. Leffler, *A Preponderance of Power: National Security, the Truman Administration, and the Cold War* (Stanford, CA: Stanford University Press, 1992) and Michael Hogan, *A Cross of Iron: Harry S. Truman and the Origins of the National Security State, 1945–1954* (New York, NY: Cambridge University Press, 1998).

Further compounding the limits on the gross size of the U.S. military imposed by U.S. domestic political economy was the effect of international political economy. Specifically, the Bretton Woods monetary regime, which was set up in 1944 to achieve a managed system balanced between flexible exchange rates (which could lead to problematic capital flows) and a pure gold standard, which was too rigid. Bretton Woods was a system of exchange rates pegged to the U.S. dollar, which would in turn be convertible to gold at a fixed rate and serve as the world's "good as gold" reserve currency.²⁵⁷

For the first 25 years of the Cold War, Bretton Woods had effects on U.S. military commitments nearly as profound as American anti-statism. Initially the regime was a problem for Western Europe, as those countries rebuilt after World War II and ran a balance of payment deficits to the United States. Yet a combination of the Marshall Plan's aid, a round of currency devaluations, and trade and capital controls in Europe ended these deficits in the early 1950s. As the European economies recovered, their previous deficits soon turned to surplus and then by the late 1950s a surfeit of dollars.

This surfeit caused rising consternation among U.S. policymakers as these Eurodollars were fully convertible to gold, and increasingly they were converted, taxing U.S. gold reserves. In a pure gold standard system, the U.S. might devalue its currency, but as the reserve currency in the Bretton Woods regime, U.S. currency devaluation would collapse the regime as other countries would no longer hold dollars. A liquidity crisis would ensue followed by all manner of economic upheaval and a potential worldwide depression (or so it was thought). Francis Gavin thus describes Eisenhower's dilemma regarding overseas forces:

The administration rejected a policy of trade and capital controls to end the deficit and gold outflow. Instead, it began to scrutinize balance-of-payments cost-of-government expenditures overseas, particularly troop deployment costs, an account the administration could control without reversing the cherished goal of trade and currency liberalization. U.S. foreign exchange expenditures in NATO Europe were roughly the size of the national deficit, a fact few found coincidental.²⁵⁸

Eisenhower, who had long believed in withdrawing U.S. troops from Europe, felt that the balance-of-payments issue made withdrawals imperative. He also proposed European "offsets," that is European use of their surplus dollars to purchase U.S. goods (particularly military equipment) to close the deficit. The Kennedy administration faced the same constraints. As Gavin notes, Kennedy often claimed that "the two things which scared him most were nuclear weapons and the payments

257 For an overview see Alfred Eckes, *A Search for Solvency: Bretton Woods and the International Monetary System, 1941-1971* (Austin, TX: University of Texas Press, 1975).

258 Francis J. Gavin, "The Gold Battles within the Cold War: American Monetary Policy and the Defense of Europe, 1960-1963," *Diplomatic History* 26, no. 1 (Winter 2002), p. 68.

deficit.”²⁵⁹ As with Eisenhower, the Kennedy administration sought to limit or even reverse the U.S. conventional commitment to Europe, while soaking up the rest of the Eurodollars with a combination of offsets and commitments from Europeans not to convert dollars to gold.

The importance of these political-economic limits on U.S. forces and deployments is that contrary to most narratives about the change from Eisenhower’s “Massive Retaliation” to Kennedy’s “Flexible Response,” large-scale nuclear escalation remained central to U.S. nuclear strategy.²⁶⁰ The credibility of large-scale nuclear use on behalf of allies for extended deterrence was undermined by U.S. vulnerability to Soviet retaliation. In a prescient encapsulation of a concern held by many, future Secretary of Defense James Schlesinger, then at the RAND Corporation, noted just before the Cuban crisis:

During the next four or five years, because of nuclear dominance, the credibility of an American first strike remains high. A selective counterforce strike of soft Soviet military targets could cripple a sizable part of the Soviet military machine. The sparing of Soviet cities, in light of the increased strategic imbalance, would provide the Soviets with every incentive to avoid reprisals against NATO cities. At the same time, the possibility of a crippling American strike against military targets will in all probability dissuade the Soviets from very provocative moves against Western Europe. For the time being the argument is sufficiently persuasive to convince the Europeans... What about the future? Unless the Soviets are less shrewd or less technically competent than we think them to be, eventually they will provide themselves with a relatively invulnerable counter-deterrent, which, permitting a much higher percentage of Soviet military might to survive, will increase the risks to the United States of a large-scale counterforce strike. Will this be in 1965, 1968, or 1970?²⁶¹

Schlesinger’s alternative in 1962 to the need for counterforces and damage limitation was to allow and perhaps even enable U.S. allies to acquire their own nuclear weapons. This course was considered and ultimately rejected with the view that such proliferation made escalation harder to control in crisis. The U.S. nuclear-

259 Francis J. Gavin, “The Gold Battles,” p. 61.

260 Francis Gavin, “The Myth of Flexible Response: United States Strategy in Europe during the 1960s,” *The International History Review* 23, no. 4 (December 2001).

261 James Schlesinger, *Some Notes on Deterrence in Western Europe* (Santa Monica, CA: RAND Corporation, 1962).

sharing arrangements in NATO were a compromise position that avoided, in particular, an independent nuclear-armed West Germany.²⁶²

The concern about a Soviet counter-deterrent was a major contributor to Secretary of Defense Robert McNamara's relatively lukewarm embrace of the so called "no cities counterforce" approach that Schlesinger alludes to and that McNamara articulated to NATO allies in May 1962, again just before the Cuban Crisis. Here he described focusing attacks on adversary military and especially nuclear forces, while withholding attacks on urban and industrial centers. He noted:

[I]n our best judgment, destroying enemy forces while preserving our own societies is—within the limits inherent in the great power of nuclear weapons—a not wholly unattainable military objective. Even if very substantial exchanges of nuclear weapons were to occur, the damage suffered by the belligerents would vary over wide ranges, depending upon the targets that are hit."²⁶³

Yet McNamara clearly believed that while an attempt at damage limitation that spared cities was probably the best the United States could do in a second-strike, it was not worth pursuing as a first strike option. In a draft memorandum to Kennedy in November 1962, he rejected as a policy objective what he defined as "a full first-strike capability"— "a capability that 'would be achieved if our forces were so large and so effective, in relation to those of the Soviet Union, that we would be able to attack and reduce Soviet retaliatory power to the point at which it could not cause severe damage to U.S. population and industry.'" McNamara rejected seeking such a capability because it was "almost certainly infeasible;" was "neither necessary nor particularly useful;" and "it would be extremely costly." McNamara very bluntly noted that based on the current intelligence projections, by 1968 even a very robust and effective U.S. first strike for damage limitation would, absent some severe Soviet blunders, result in a Soviet second strike that "could inflict roughly 50 million direct fatalities in the United States, even with fallout protection. I do not consider this an 'acceptable' level of damage."²⁶⁴

McNamara's critique of damage limitation produced a very powerfully worded response from the Joint Chiefs of Staff, which is worth quoting at length:

The Air Force has never counseled a "full" first-strike capability in the sense of indemnifying the United States completely from serious

262 This is a very short summary of a complex process. See Francis J. Gavin, "Strategies of Inhibition: U.S. Grand Strategy, the Nuclear Revolution, and Nonproliferation," *International Security* 40, no. 1 (Summer 2015).

263 "Address by Secretary of Defense McNamara at the Ministerial Meeting of the North Atlantic Council," Athens (May 5, 1962), FRUS 1961–1963, vol VIII, *NATIONAL SECURITY POLICY*, doc 82.

264 "Draft Memorandum From Secretary of Defense McNamara to President Kennedy," (November 21, 1962), FRUS 1961–1963, vol VIII, *NATIONAL SECURITY POLICY*, doc 112. The U.S. population in 1962 was roughly 185 million.

consequences. The Air Force has rather supported the development of forces which provide the United States a first-strike capability credible to the Soviet Union, as well as to our Allies, by virtue of our ability to limit damage to the United States and our Allies to levels acceptable in light of the circumstances and the alternatives available.

The Joint Chiefs of Staff consider that a first-strike capability is both feasible and desirable, although the degree or level of attainment is a matter of judgment and depends upon the U.S. reaction to a changing Soviet capability. They consider the definition of adequate U.S. first-strike capability to be that military power required to conduct a nuclear attack against the Sino-Soviet Bloc, prior to its striking the United States, that would degrade substantially the capability of the Sino-Soviet Bloc to inflict damage on the United States and Free World forces, economic structure, and society to the extent that the United States and its Allies would emerge with a relative power advantage over the Sino-Soviet Bloc. A first-strike, or a pre-emptive option, provides the United States and its Allies increased latitude within the total spectrum of military possibilities. It is also fundamental in maintaining the cohesion of the free-world alliances. For example, a capability for pre-emption is essential if the United States is to convince the NATO Alliance of its determination to employ external forces when such is necessary to prevent the over-running of Europe by Soviet forces. A first-strike capability is a credible threat which, if employed firmly and judiciously in consort with other major elements of national military power, can serve to confine and prevent escalation of lesser levels of conflict. In light of this, a first-strike option is required to meet our military commitments and provide for guarantees already made by the United States to its NATO Allies. The degree to which a first-strike capability has deterred limited aggression is difficult to determine since we are unable to assess Soviet behavior had the United States possessed a lesser capability. The Soviets have shown restraint in their actions and have carefully avoided direct commitment of Russian forces to limited aggression. If the rationale presented in the draft memorandum is intended to suggest that there are no circumstances in which we will initiate the use of strategic forces, then we believe that we must face fully the cost of other alternatives, such as matching the Soviet Union in other areas of military strength, including those areas in which it now possesses a clear margin of advantage.²⁶⁵

265 Joint Chiefs of Staff Memorandum 907-62, quoted in in FRUS 1961–1963, vol VIII, *NATIONAL SECURITY POLICY* doc 109.

This difference between McNamara and the Joint Chiefs is important because neither side rejected entirely the concept of damage limitation yet they differed widely in how they assessed feasibility and utility. McNamara felt that a first strike option was not meaningful and was of little value, in large part because he believed the central risk of deterrence failure was that “war may break out in an accidental or unpremeditated way, or as the consequence of enemy irrationality or miscalculation.”²⁶⁶ In contrast, the Joint Chiefs, echoing Schlesinger, underscored the importance of a credible first strike to deterring the Soviets from deliberate aggression, including relatively limited aggression such as a move against Berlin, and to assuring allies so as to maintain alliance cohesion.

This divergence on the implications of a Soviet secure second strike highlights a key aspect of nuclear deterrence and is captured in the term “stability-instability paradox.”²⁶⁷ If both sides have a secure second-strike capability (stability) then aggression that does not cross a very high threshold, such as threatening the survival of one of the states possessing a secure second strike, is possible and maybe even incentivized (instability). McNamara noted in his draft memo that the “threat of U.S. first-strike has long since been shown to be ineffective in deterring limited provocations and aggression. Therefore, it has been necessary to build up our theater forces at levels at which they would be adequate to meet our commitments without resort to nuclear weapons. We have made a great deal of progress toward this objective in the past two years, and we plan further progress.” While McNamara argued that U.S. conventional capabilities were the answer to the stability-instability paradox, the Joint Chiefs, as noted in their memorandum, was not sanguine. The reality of the political-economic limits on resource extraction meant matching Soviet conventional capabilities was not likely—at least in the early Cold War.

Over the course of the 1960s, the Joint Chiefs view was vindicated.²⁶⁸ Rather than the progress McNamara envisioned towards a conventional posture that could meet U.S. commitments, involvement in Vietnam further undermined U.S. posture in Europe. Vietnam, combined with the ongoing balance of payments challenge and other economic concerns culminated in the U.S. withdrawal of significant Army and Air Force units totaling over 28,000 personnel.²⁶⁹

At the same time, the Soviet Union built the robust strategic nuclear force that both Schlesinger and McNamara envisioned in 1962. The United States, in contrast, did not pursue significant investments in the sort of first-strike capability recommended

266 “Draft Memorandum From Secretary of Defense McNamara to President Kennedy.”

267 First articulated in Glenn H. Snyder, *Deterrence and Defense: Toward a Theory of National Security* (Princeton, N.J.: Princeton University Press, 1961).

268 Francis J. Gavin, “Myth of Flexible Response.”

269 This is a gross simplification of a complex process, which culminated in U.S.-U.K.-West German Trilateral Talks on forces in Germany, and the agreement on, among other things, the U.S. withdrawal. See Gregory F. Treverton, *The Dollar Drain and American Forces in Germany* (Athens, OH: Ohio University Press, 1978) and “Final Report on Trilateral Talks,” in FRUS 1964–1968, vol XIII, WESTERN EUROPE REGION.

by the Joint Chiefs in 1962. The result was that the United States, which might have avoided any significant retaliation if it launched a large-scale preemptive strike in 1962, had lost much of its damage limitation capability by 1968.

The Nixon administration's National Security Council staff concluded in early 1969 that McNamara's assessment from 1962 of the post-1968 nuclear balance was basically correct. The staff noted that "the Soviets may have to work harder and spend relatively more money than the U.S. in maintaining their second-strike capability," but they nonetheless would retain the ability to inflict "40% U.S. fatality levels throughout the 1970s (80 million)" in a second strike.²⁷⁰ Neither Nixon nor his chief advisors such as Henry Kissinger were particularly satisfied when briefed on this situation. The administration commissioned several reviews and studies of nuclear targeting, which came to fruition after Schlesinger became Secretary of Defense.²⁷¹

The Nixon administration followed two complementary tracks in overhauling U.S. nuclear policy. The first was to implement the concept of the limited nuclear option (LNO). Rather than the large-scale attacks envisioned in existing plans, an LNO might target only a few select locations such as missile silos or submarine bases.²⁷² The intent was to inflict harm and demonstrate willingness to use nuclear weapons without provoking a catastrophic Soviet response.

Elegant in theory, LNOs were difficult to put into practice. U.S. military planners continued to have deep concerns about command and control in a nuclear environment. LNOs might also need to be "customized" for scenarios, but real-time re-targeting was challenging to say the least in the early 1970s. Moreover, the Soviets might be no less capable of using LNOs. LNOs might become tit for tat exchanges where willingness to accept death on the installment plan would determine the victor. Schlesinger himself had foreseen as much in 1962:

In a war of nerves, with limited encounters, which side will prove the stronger—especially when we have reached the city-swapping stage? How long will the American public accept a game played by these rules? Thus the final question appears: what does the decline

270 National Security Council staff memorandum, "Strategic Policy Issues" (circa February 1, 1969); included in the National Security Archive briefing book. <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB173/>. Accessed June 26, 2024.

271 See William Burr, "The Nixon Administration, the 'Horror Strategy,' and the Search for Limited Nuclear Options, 1969–1972: Prelude to the Schlesinger Doctrine," *Journal of Cold War Studies* 7, no. 3 (Summer 2005); Brendan Rittenhouse Green, *The Revolution that Failed: Nuclear Competition, Arms Control, and the Cold War* (Cambridge: Cambridge University Press, 2020); and Marc Trachtenberg, "The United States and Strategic Arms Limitation during the Nixon-Kissinger Period: Building a Stable International System?" *Journal of Cold War Studies* 24, no. 4 (Fall 2022).

272 The smallest option in the Single Integrated Operational Plan (SIOP) nuclear plan at the beginning of the Nixon administration was a preemptive attack on Sino-Soviet strategic nuclear delivery systems. It used roughly 1,750 weapons, though more or fewer would be required depending on how and when the option was executed. See Memorandum for Dr. Kissinger, "The SIOP" (November 8, 1969), National Security Archive briefing book. <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB173/>. Accessed June 26, 2024.

of nuclear dominance do to the protection offered to Europe by a sophisticated deterrent [that] remains under American control?²⁷³

This concern about the viability of LNO led to the second component of Nixon and Schlesinger's doctrine, which was to reemphasize damage limitation. Doing so would require enhancing U.S. nuclear forces and improving their command and control (which would also help make LNOs more plausible). Fortunately, the technology of multiple-independently targetable re-entry vehicles (MIRVs) had matured and, if combined with high accuracy of warheads, promised the ability to destroy substantial numbers of Soviet nuclear launchers with relatively few U.S. launchers.²⁷⁴ Schlesinger thus pressed for more refined war plans and, especially, the development of accurate, MIRVed weapons.²⁷⁵

Most notably, Schlesinger pushed hard for accurate, high-yield warheads for submarine-launched ballistic missiles (SLBMs).²⁷⁶ U.S. ballistic missile submarines were, thanks to the U.S. "acoustic advantage," essentially invulnerable at sea (unlike Soviet submarines, which were very vulnerable in this period).²⁷⁷ U.S. submarines therefore presented no target for a Soviet first-strike. Yet if they had robust counterforce capability they would enable as U.S. first strike. Indeed, because submarines could move close to the Soviet Union (relative to missiles based in the United States), they could potentially reduce warning time after launch. This would make them particularly attractive for attacking Soviet command and control and early warning systems.

This effort to begin rebuilding U.S. capability for damage limitation worked in tandem with U.S. arms control policy, which sought to limit Soviet quantitative build-up. Limiting quantity was important to hold down the size of the target base for damage limitation, while qualitative improvements in U.S. forces would be unconstrained. This combination proved highly effective, with the Strategic Arms Limitation Talks (SALT) producing an interim agreement in 1972 that capped intercontinental ballistic missiles but did not limit MIRVing or accuracy improvements. Of course, the Soviets voluntarily accepted that cap in part because the build-up they

273 Schlesinger, p. 10.

274 Ted Greenwood, *Making the MIRV: A Study of Defense Decision Making* (Cambridge, MA.: Ballinger Pub. Co., 1975).

275 Brendan Rittenhouse Green and Austin Long, "The Geopolitical Origins of U.S. Hard-Target Kill Counterforce Capabilities and MIRVs," in Michael Krepon, Travis Wheeler, and Shane Mason, eds. *The Lure and Pitfalls of MIRVs: From the First to the Second Nuclear Age* (Washington, DC: Henry L. Stimson Center, 2016); Donald A. MacKenzie, *Inventing Accuracy: A Historical Sociology of Nuclear Missile Guidance* (Cambridge, MA.: MIT Press, 1993).

276 Donald MacKenzie and Graham Spinardi, "The Shaping of Nuclear Weapon System Technology: U.S. Fleet Ballistic Missile Guidance and Navigation, II: 'Going for Broke': The Path to Trident II," *Social Studies of Science* 18, no. 4, (November 1988); and Owen R. Coté, "The Trident and the Triad: Collecting the D-5 Dividend," *International Security* 16, no. 2 (Autumn 1991).

277 Owen R. Cote, Jr., *The Third Battle: Innovation in the U.S. Navy's Silent Cold War Struggle with Soviet Submarines* (Newport, R.I.: Naval War College, 2003).

began after the Cuban Missile Crisis was nearly complete, but the SALT agreement codified this limit.²⁷⁸

The combination of numerical limits, MIRV, and accuracy, along with very effective U.S. anti-submarine warfare capabilities, meant that the calculus of damage limitation once again began to shift.²⁷⁹ By 1976, one State Department assessment noted that another State Department assessment looking forward from the mid-1970s asserted that if the United States deployed a planned highly MIRVed and accuracy ICBM, “the Soviets could expect to lose nearly 90% of their total strategic warheads from a US first strike in the mid-1980s. This is a reasonably close approximation of a disarming first strike.” Even without a new missile, “planned improvements to Minuteman ICBMs will give the U.S. a capability to destroy half of the USSR’s silo-based ICBM force, representing a loss of about 60% of the Soviet’s total strategic warhead capacity.”²⁸⁰

Of course, 90% of the 7,000 or so strategic warheads the Soviets deployed in the late 1970s would still leave 700 warheads remaining. Surely that would be more than enough to inflict unacceptable damage to the United States, as McNamara had believed. Yet Soviet command and control (C2) could be targeted in a first-strike and for both technical and political reasons Soviet C2 was vulnerable to decapitation. The technical causes of vulnerability were a product of both the speed and scale of nuclear attack, as well as Soviet relative technological backwardness. Assessments of the survivability of U.S. C2 systems in the 1970s were generally grim, but Soviet systems were assessed to be worse at some points.²⁸¹ The political cause was Soviet Communist Party leadership’s reluctance to delegate nuclear release authority or to identify in advance the successor to the Party’s general secretary. The technical cause was inability to field a full suite of sensors and communications tools believed to be needed for nuclear conflict.²⁸² Further, based on East German sources, the Soviets may have believed in the 1980s the United States had the ability to disrupt its nuclear command and control system through electronic warfare.²⁸³

278 B.R. Green, *The Revolution that Failed*; Trachtenberg, “The United States and Strategic Arms Limitation during the Nixon-Kissinger Period,” and James Cameron, *The Double Game: The Demise of America’s First Missile Defense System and the Rise of Strategic Arms Limitation* (New York, NY: Oxford University Press, 2018).

279 See summary in A. Long and B.R. Green, “Stalking the Secure Second Strike,” and B.R. Green and A. Long, “The Geopolitical Origins of U.S. Hard Target Counterforce Capabilities and MIRVs.”

280 “Action Memorandum From the Acting Director of the Bureau of Politico-Military Affairs (Goodby) and the Director of the Policy Planning Staff (Lord) to Secretary of State Kissinger” FRUS, *National Security Policy 1973–1976* 35, doc 109 (November 16, 1976).

281 See Leonard Wainstein et al., *The Evolution of U.S. Strategic Command and Control and Warning, 1945-1972* (Alexandria, VA: Institute for Defense Analyses, 1975- originally classified TOP SECRET). The U.S. intelligence community believe Soviet C2 systems had “...considerably less sophistication and precision than in comparable U.S. command and control systems.” See National Intelligence Estimate 11-8-64, “Soviet Capabilities for Strategic Attack” (October 1964), pp. 15-16- originally classified TOP SECRET. By the Carter administration, U.S. C3 advantages were less certain. See FOREIGN RELATIONS OF THE UNITED STATES, 1977–1980, VOLUME IV, *NATIONAL SECURITY POLICY*, doc 124, “Summary of Conclusions of a Special Coordination Committee Meeting, Washington” (April 25, 1979).

282 See summary in B.R. Green and A. Long, “The MAD Who Wasn’t There.”

283 Benjamin B. Fischer, “CANOPY WING: The U.S. War Plan That Gave the East Germans Goose Bumps,” *International Journal of Intelligence and Counterintelligence* 27, no. 3 (May 12, 2014).

The Carter administration inherited the efforts begun under the Nixon administration to bolster U.S. damage limitation capabilities. The administration launched a major review of nuclear strategy: the Nuclear Targeting Policy Review. In its conclusions, conveyed to President Carter in November 1978, it carefully enumerated opposing views of damage limitation in light of Soviet efforts to achieve a survivable nuclear force at parity with the United States. The report's findings are worth quoting at length:

The proliferation and hardening of Soviet missile systems have substantially eroded our counterforce capabilities over the past decade. We have found no plausible changes to targeting policy or force structure in the course of this study that give any promise of restoring the relative capabilities we enjoyed in the early 1960s. This does not mean, of course, that we can or should do nothing to improve the present or prospective balance. Cruise missiles will put Soviet land based missile systems and other hard targets at risk again, but this will not give us a prompt capability; MX and TRIDENT II will, however.

With respect to the damage limiting objective, today there are two distinct views as indeed there have been for some time. One view holds that since we cannot expect to limit to low levels the damage resulting from a large scale nuclear attack, that it is no longer a meaningful objective and should be abandoned or at least given a low priority in employment policy. A central concern is that continuance of damage limiting as a major objective of U.S. policy could lead to increased arms competition without any resulting improvements in U.S. security and could divert forces from more promising objectives. The opposing view is that we must continue to do the best that we can to protect the U.S. from the consequences of a nuclear war if deterrence fails. Given the uncertainties of nuclear war, and the wide range of possible scenarios, there might well be situations where the capability to reduce damage by perhaps tens of millions of American lives would be far from futile. This view also stresses the potential effects on deterrence and crisis management in situations short of nuclear war if U.S. society were to become far more vulnerable than the Soviet Union... while we lack the ability to limit damage to the U.S. society meaningfully in a large-scale Soviet attack, we are reluctant wholly to eliminate this as an objective of U.S. policy, particularly because to do so explicitly would appear to confirm a major asymmetry between U.S. and Soviet policy and would ignore important uncertainties about the effectiveness of a damage limiting strategy.²⁸⁴

284 *Nuclear Targeting Policy Review*, "Summary of Major Findings and Recommendations" (November 28, 1978), pp. iv.-xii.

As Brendan Green and I have noted, the rationale described above in the Nixon through Carter administrations informed U.S. acquisition policy, leading to the acquisition of accurate prompt counterforce weapons such as the MX aka Peacekeeper ICBM and Trident D5 SLBM. It also led to investments in intelligence and counter-command and control capabilities. The Reagan administration supplied more resources to the acquisition of these capabilities but largely retained the strategy behind them. It also invoked the specter of effective national missile defenses, a source of neuralgia for Soviet leaders.²⁸⁵

These damage limitation capabilities ultimately undermined Soviet confidence in the long-term viability of their second-strike capability, in large part due to their political-economic inability to compete with the West. U.S. leaders understood, albeit imperfectly, Soviet political-economic weakness and that as the Cold War competition continued, “something would have to give.”²⁸⁶ That “something” turned out to be, among other things, Soviet confidence in assured retaliation. As noted earlier, some senior Soviet officials doubted they could continue to meet their own criteria for assured destruction. One noted that “[e]xisting Strategic Rocket Forces are capable of hitting 80 enemy targets in retaliation, by 1995 100 targets, and by 2000 150 targets, slightly below the calculated level of retaliation required- 200 targets.”²⁸⁷ Some U.S. intelligence assessments reflected Soviet concerns, with one noting “[a]lthough the Soviet strategic nuclear force in the late 1970s was powerful and versatile (over 7,000 strategic nuclear weapons), it was nonetheless highly vulnerable to a U.S. surprise attack—a so-called bolt from the blue.”²⁸⁸

This fear that the Soviets could not assure destruction in retaliation led to doubts about the broader strategic competition. While still head of the KGB, Yuri Andropov mused to his East German counterpart Erich Mielke, “The U.S. is preparing for war but it is not willing to start a war... They strive for military superiority in order to ‘check’ us and then declare ‘checkmate’ against us without starting a war.”²⁸⁹ While Andropov exhorted his colleagues to prevent this checkmate, his short tenure as leader of the Soviet Union did little to halt it. Mikhail Gorbachev’s subsequent efforts at reforming the Soviet system would ultimately bring an end to the Cold War. While the competitive pressure from U.S. damage limitation capabilities were not the sole

285 See Austin Long, “Red Glare: The Origin and Implications of Russia’s ‘New’ Nuclear Weapons,” *War on the Rocks* (March 26, 2018).

286 For a summary of this argument and its relationship to prominent academic theorizing on nuclear strategy, see Austin Long, “Impermanent Revolution: MAD Is a Variable, Not a Constant,” in “Book Review Roundtable: The Meaning of the Nuclear Revolution 30 Years Later,” *Texas National Security Review* (April 2020). For an overview of arguments about what U.S. policymakers knew about Soviet economic weakness, see “Rubles, Dollars, and Power: U.S. Intelligence on the Soviet Economy and Long-Term Competition: A Response Essay,” *Texas National Security Review* 1, no. 4 (August 2018).

287 Kataev, “Mobile Missile Basing.”

288 President’s Foreign Intelligence Advisory Board, “The Soviet War Scare” (February 15, 1990), p. 42.

289 Stasi record of Mielke-Andropov meeting (July 11, 1981). <http://digitalarchive.wilsoncenter.org/document/115717>. Accessed June 28, 2024.

or perhaps even primary driver of the Cold War's conclusion, they almost certainly played a significant part.

Damage Limitation in the 21st Century

The logic articulated above on the importance of damage limitation extends to U.S. nuclear strategy in the 21st century. The Joint Chiefs of Staff rebuttal to McNamara remains sound six decades later. Unless the United States and its allies are willing to invest very significant resources in conventional defense against multiple nuclear armed rivals (Russia, China, and North Korea, with Iran at the threshold), then relying on the threat of nuclear escalation for deterrence is imperative. This deterrence extends to both nuclear and non-nuclear strategic attacks (the latter including major conventional attacks on U.S. allies).

Given competing priorities such as domestic expenditures, it seems unlikely the United States and its allies will commit sufficient resources to conventional defense to ensure deterrence, and, if deterrence fails, achieve U.S. and allied war aims. The contrast of the wartime expansion of Russian armaments production since 2022 (aided by China, Iran, and North Korea) with Western defense industry production challenges is sobering evidence of the challenge of conventional deterrence.²⁹⁰ Yet even if the West does invest sufficient resources to produce a credible conventional deterrent, its rivals are building nuclear forces to provide themselves a variety of nuclear escalation options. As in the Cold War, these rivals may believe the United States, with lower stakes in crises than the rivals, would avoid even limited nuclear escalation, particularly on behalf of its allies.²⁹¹

In contrast to conventional deterrence, nuclear weapons for deterrence remain economically more attractive, though the political economy of the 21st century is radically different from one preceding it. Bretton Woods is no more as is the draft in most Western countries. Yet nuclear weapons remain relatively inexpensive, particularly once infrastructure costs are paid. In 2023, the Congressional Budget Office estimated that current plans for recapitalization of the U.S. nuclear enterprise and sustainment and modernization of U.S. nuclear forces—including both costs for the Department of Defense and Department of Energy—would total roughly \$75 billion per year from 2023-2032. This figure includes nearly \$100 billion in projected cost growth, some of which is already being realized.²⁹² Yet even if those costs increase by another third, the cost of nuclear forces and infrastructure would only be \$100 billion a year. While this an enormous sum, it is just over 10% of the combined Department of Energy and Department of Defense budgets for fiscal year 2024.

290 Alistair MacDonald and Kate Vtorygina, "Russia Is Pumping Out Weapons—but Can It Keep It Up?" *The Wall Street Journal* (March 11, 2024).

291 See discussion of "Red" theories of victory, including reliance on limited nuclear escalation, in Brad Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century* (Stanford, CA: Stanford University Press, 2015) and Brad Roberts, *On Theories of Victory, Red and Blue* (Livermore, CA: Center for Global Security Research, 2020).

292 Congressional Budget Office, "Projected Costs of U.S. Nuclear Forces, 2023 to 2032" (July 2023).

The figures above oversimplify the case for nuclear deterrence, as expenditure on nuclear weapons do not inherently reflect the operational reality of escalation and damage limitation. Much of what enables damage limitation are non-nuclear capabilities that enable finding mobile and/or concealed targets, disrupting adversary warning and command and control, and, ideally, effective missile defenses.²⁹³ These capabilities are likely to be expensive themselves, and in some cases may be difficult to reveal to the adversary, which makes them challenging to use for deterrence.²⁹⁴

However, U.S. allies can make a major contribution to these non-nuclear capabilities, providing unique capabilities and insights of their own as well as—in many cases—geographically advantageous locations. For example, allies played a major role in successful U.S. efforts to hold Soviet ballistic missile submarines at risk during the Cold War.²⁹⁵ Allied contributions in new domains such as space and cyber as well as existing capabilities such as intelligence and missile defense will likely be crucially important.²⁹⁶

The principal challenge to damage limitation in the 21st century is the emergence of the so-called “two peer” or “three body” problem. This is shorthand for the rapid expansion of China’s nuclear capabilities that began in the 2010s and has increased in speed and scale since 2020.²⁹⁷ China’s expansion is set to make it a nuclear peer (roughly defined) of the United States and Russia. This expansion is without question the most significant development in nuclear strategy and deterrence since the end of the Cold War.

In 2019, I wrote on the importance of damage limitation and extended deterrence in the U.S.-China relationship.²⁹⁸ I advocated for a more competitive nuclear strategy with China that would pursue damage limiting capabilities, for reasons articulated above. This would bolster deterrence and force China to invest more in the survivability of its nuclear forces. Though correlation is not causation, China subsequently has done just that, including not just expansion but changes to command and control that could enable it to, among other things, launch its nuclear forces on warning of an adversary attack.

293 See B. Bahney and B. Soper.

294 Brendan Rittenhouse Green and Austin Long, “Conceal or Reveal? Managing Clandestine Military Capabilities in Peacetime Competition,” *International Security* 44, no. 3 (Winter 2019/20).

295 See B.R. Green and A. Long, “Conceal or Reveal?”; Owen Coté, *The Third Battle: Innovation in the US Navy’s Silent Cold War Struggle with Soviet Submarines* (Newport, RI: Naval War College 2003); Christopher Ford and David Rosenberg, *The Admirals’ Advantage: U.S. Navy Operational Intelligence in World War II and the Cold War* (Annapolis, MD: Naval Institute Press, 2014); and Peter Hennessy and James Jinks, *The Silent Deep: The Royal Navy Submarine Service Since 1945* (London: Penguin, 2016).

296 Paul Bernstein and Austin Long, “Multi-Domain Deterrence: Some Framing Considerations,” in Brad Roberts, ed., *Getting the Multi-Domain Challenge Right* (Livermore, CA: Center for Global Security Research, 2021).

297 Austin Long, “Myths or Moving Targets? Continuity and Change in China’s Nuclear Forces,” *War on the Rocks* (December 4, 2020). See also Department of Defense, *Military and Security Developments Involving the People’s Republic of China* 2023.

298 Austin Long, “U.S. Nuclear Strategy toward China: Damage Limitation and Extended Deterrence,” Eric Gomez and Caroline Dorminey, eds., *America’s Nuclear Crossroads* (Washington, DC: Cato Institute, 2019).

Is damage limitation feasible in this two-peer world? The answer is yes from a purely technical perspective.²⁹⁹ Damage limitation does not require matching rival nuclear forces on a warhead-to-warhead basis. It requires, as described initially, the capabilities necessary to cause a rival to doubt its nuclear force's ability to inflict unacceptable damage in retaliation. If the United States was able to cause the Soviet Union (with a much larger strategic nuclear force than Russia and China have today combined) to doubt the efficacy of its assured retaliation, then it is equally plausible that it can do the same today. Indeed, China now has some of the same weaknesses the Soviets had, such as centralized nuclear release authority in the person of Xi Jinping and no obvious successor if he is killed, disabled, or is otherwise unable to communicate.

While the U.S. nuclear complex and nuclear forces are not what they were at the height of the Cold War, the current nuclear recapitalization and modernization effort will do much to mitigate the force's current shortfalls. More and different capabilities than are currently planned will no doubt be required but nuclear forces remain relatively inexpensive. Modest adjustments to provide additional damage limiting capability (e.g., more highly accurate prompt weapons) are readily attainable.

Yet as with the Cold War, much hinges not on the specifics of measures and countermeasures (submarine vs. anti-submarine, mobile missile tactics vs. reconnaissance systems, etc.) but the nature of the competition and the comparative fitness for competition. The feasibility of the United States achieving and maintaining damage limitation against both Russia and China will thus be determined by these broader factors. Two factors loom large: first, is the competition for quantity, quality, or both? Second, how well is the political economy of each of the rival's structured for that competition?

Competition with Russia seems relatively straightforward, as it is not well set up for anything other than quantitative competition of relatively low quality items. While its conventional defense industry, with substantial outside help, has risen to the task of mass producing items like artillery shells, it has struggled in its own nuclear modernization. For example, the Sarmat heavy ICBM, intended as the replacement for the 1970s vintage Voevoda, is plagued with challenges.³⁰⁰ At the same time, one assessment of Russia's defense expenditures, including those generally related to the war in Ukraine, calculates Russia is likely already spending roughly 10% of GDP on the

299 For an overview of some of the technical changes since the Cold War that make damage limitation less technically challenging, see Keir Lieber and Daryl Press, "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence," *International Security* 41, no. 4 (Spring 2017), pp. 9–49; a revised version of which appears in Lieber and Press, *The Myth of the Nuclear Revolution* (Ithaca, NY: Cornell University Press, 2020), Chapter 3. For a contrary view, see Christopher Clary, "Survivability in the New Era of Counterforce," in Vipin Narang and Scott Sagan, eds., *The Fragile Balance of Terror: Deterrence in the New Nuclear Age* (Ithaca, NY: Cornell University Press, 2022).

300 Maxim Starchak, "Russia's Sarmat Missile Saga Reflects an Industry in Crisis," *Carnegie Politika* (October 18, 2023).

military.³⁰¹ It thus likely has little room to compete quantitatively or qualitatively with the United States and its allies over the course of a long competition.

China is a very different case. It obviously has vastly more resources available than Russia for quantitative competition. It also has cutting edge technologies in a number of militarily relevant areas. Yet it lacks many of the advantages in the nuclear realm that both the United States and Russia gained over the long Cold War. For one, China lacks the large set of full- or high-yield nuclear test data that the Cold War rivals built—more than 1,000 for the United States and more than 700 for the Soviet Union/Russia. In contrast, China has just over 40 publicly known tests.³⁰² It also lacks operational experience on quiet submarine operations and “continues to suffer from surprising weaknesses in propulsion... and submarine quieting.”³⁰³

Moreover, China’s economy no longer seems the juggernaut it did just a few years ago. Economic growth has slowed and the entrepreneur-class has been tamed if not neutered by Xi and the Communist Party.³⁰⁴ China will thus likely face hard choices about resources expenditures and, despite its rapid expansion, it is starting from well behind the United States in nuclear forces. Combined with persistent concerns about corruption, which likely led to the dismissal of many of the leaders of the People’s Liberation Army Rocket Force amid worries of faults in new nuclear systems, China may be challenged to maintain confidence in its ability to inflict unacceptable damage in retaliation.³⁰⁵

To be clear, the United States faces political-economic challenges of its own. Yet it seems better postured to address those challenges, both generally and specifically in the nuclear realm, than its adversaries. Much will depend on the strategic case made for nuclear weapons and their unique role in U.S. strategy to extend deterrence to allies. The recent Congressional Strategic Posture Commission does not specifically advocate for damage-limiting capabilities. However, it certainly underscores the unique value they bring and its exhortations that the nuclear modernization program of record is necessary but not sufficient are aligned with damage limitation objectives.³⁰⁶

Risks of Pursuing Damage Limitation in a “Two-Peer” World

The chief risk of pursuing damage limitation is to strategic stability, a much abused conceptual term. Here I mean it in the classical sense, encompassing two forms of

301 Boris Grozovski, “Russia’s Unprecedented War Budget Explained,” Kennan Institute Russia File (September 7, 2023).

302 Arms Control Association, “The Nuclear Testing Tally” (August 4, 2023).

303 Sarah Kirchberger, *China’s Submarine Industrial Base: State-Led Innovation with Chinese Characteristics* (Newport, RI: Naval War College China Maritime Studies Institute, 2023), p. 1.

304 “Xi Jinping’s misguided plan to escape economic stagnation,” *The Economist* (April 4, 2024).

305 Lyle J. Morris, “XI’S PURGE AND CORRUPTION IN THE PLA,” 9DashLine (March 5, 2024) and Ying Yu Lin, “PLA Personnel Shakeups And Their Implications,” *China Brief* 24, no. 3 (February 2, 2024).

306 *AMERICA’S STRATEGIC POSTURE: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (October 2023). The Commission does advocate for substantially more than nuclear capabilities, including conventional arms.

stability. The first is the concept of “first-strike stability,” defined as the lack of either incentives or pressures to use nuclear weapons first in a crisis. It is this stability that yields the stability-instability paradox described earlier. In a crisis characterized by perfect first-strike stability, leaders are indifferent to whether their nuclear forces are employed first or second as the results will be the same—and presumably equally catastrophic. Policies promoting first-strike stability are explicitly about reducing the use-or-lose incentive. First-strike stability helps avoid the problem of inadvertent escalation, to some degree. The second form of strategic stability incorporates the idea of “arms-race stability.” Arms race stability prevails when neither side of an adversarial relationship believes it must greatly expand the quantity or quality of its nuclear arsenal to maintain first-strike stability.³⁰⁷

Damage limitation explicitly challenges first-strike stability and, as a result, can often challenge arms-race stability. The latter challenge is inherent in strategic competition, and managing the nature and intensity of the competition (or arms race) requires a variety of tools, including arms control. It is also impacted by perceptions of first-strike stability.

First-strike stability and damage limitation are also in inherent tension. RAND Corporation analysts Glenn Kent and David Thaler summed up at the end of the Cold War that:

The most important conflict arises between the objectives of enhancing first-strike stability, on one hand, and extending deterrence and limiting damage, on the other; i.e., the more robust the Soviets believe first-strike stability to be... the less they might hesitate to precipitate a deep crisis by engaging in serious aggression... Balancing between first-strike stability and extended deterrence presents a problem in the planning of strategic forces.³⁰⁸

Kent and Thaler further argued that, at least conceptually, an “optimum instability” existed that perfectly balanced the credible threat of a first-strike in extreme circumstances. This “optimum instability” would generate sufficient doubt in the mind of the adversary about stability that the adversary would avoid crisis. Yet it would not so undermine instability that an adversary would feel extreme pressure to take precipitate action in crisis (or provoke crisis if it believed its assured retaliation would be worse in the future).

307 See summary in Austin Long, *Deterrence—From Cold War to Long War: Lessons from Six Decades of RAND Research* (Santa Monica, CA: RAND Corporation, 2008).

308 Glenn A. Kent and David E. Thaler, *First-Strike Stability: A Methodology for Evaluating Strategic Forces* (Santa Monica, CA: RAND Corporation, 1989), p. 5. See also Paul K. Davis, *Studying First-Strike Stability with Knowledge-Based Models of Human Decisionmaking* (Santa Monica, CA: RAND Corporation, 1989).

Pursuing damage limitation requires seeking Kent-Thaler “optimum instability” with both U.S. nuclear rivals. This is inherently more complex than bilateral optimum instability, as efforts to maintain damage limitation against two rivals may make either feel more pressure (and threat) than they would if they assessed their assured retaliation jointly. In other words, the set of capabilities needed to produce optimum instability with both Russia and China simultaneously and cumulatively may not yield optimum instability with either Russia or China individually. This merits substantial consideration and would be a fruitful area for additional research.

Conclusion

The military counsel of the Joint Chiefs of Staff in the early 1960s remains sound more than six decades later. Convincing nuclear rivals that the United States is prepared to use nuclear weapons first in extreme circumstances in defense of its vital interests—and more importantly its allies’ vital interests—is the bedrock of deterrence. While a nuclear war cannot be won in any meaningful sense, and thus should never be fought, damage limitation is both morally and strategically imperative.

Counterforce Strategy Versus Counterforce Targeting

Patrick McKenna

Counterforce, countervalue, strategy, and targeting approaches—these are terms that mean something to everyone but unfortunately not the same thing to everyone. Debates are often centered on the terms rather than the basics underlying those terms. Clarity about those basics may help to illuminate many points of current debate. Toward that end, this chapter proceeds as follows. It begins with a review of the roles of nuclear weapons in U.S. national security strategy. It then considers the purposes for which nuclear weapons might be employed in war and utilized in crisis and peacetime. Lastly, it explores different targeting approaches in terms of their ability to achieve those purposes.

The Roles of Nuclear Weapons

There has been consensus—at a macro level—that nuclear weapons assist in 1) deterring our adversaries, 2) assuring our allies, 3) achieving objectives should deterrence fail, and 4) managing risks that are inherent to a highly dynamic geopolitical environment. These four areas are discussed, to varying degrees, in all the nuclear posture reviews and are sometimes labeled as the “roles” of nuclear weapons.³⁰⁹

To understand the roles that nuclear weapons play in U.S. defense and deterrence strategies, the necessary point of departure is the so-called conflict continuum. This is because the ways these roles are applied shift in peacetime, crisis, and war.

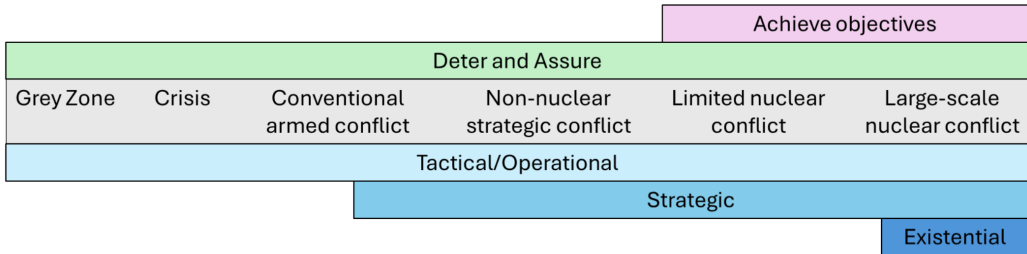


Figure 1: Conflict Continuum³¹⁰

309 The 2018 *Nuclear Posture Review* (NPR) listed all four as roles [2018 *Nuclear Posture Review*, Office of Secretary of Defense (February 2018), p. VII]. The 2022 NPR dropped risk management as a role but states “The United States will continue to carry out robust risk management strategies within the nuclear enterprise...” [2022 *Nuclear Posture Review*, Office of Secretary of Defense (October 2022), p. 7].

310 Figure 1 is developed from the graphics in Jansen, “New Strategic Deterrence Frameworks for Modern Day Challenges,” *Joint Forces Quarterly* 112 (1st qtr 2024), pp. 60-69.

The grey box in the middle of the figure is the conflict continuum. It starts on the far left in the Grey Zone and ends on the far right with large-scale nuclear conflict. Movement from left to right in the continuum indicates increasing intensity of crisis/conflict. Below the grey box are common terms that are also used to describe the intensity of conflict. Starting on the right is the “Existential” category, which indicates a threat to the existence of the state. The “Strategic” category in the box above refers to some type of activity that is designed to change the nature of the conflict in the adversary’s decision calculus (e.g., initial use of a nuclear weapon). The “Tactical/Operational” category box above consists of activities that occur across the entire conflict continuum. Above the grey box are a number of boxes that cover the specified roles of nuclear weapons. The “Deter and Assure” (green box) role is applicable across the continuum, but the “Achieve Objectives” (by employing a nuclear weapon) role is applicable only to the right side of the continuum.

Nuclear capabilities have varying purposes and utilities across the continuum. For example, nuclear capabilities may enhance deterrence of a conventional armed conflict or nuclear capabilities may be used to achieve a military objective, as determined by the president against an adversary with nuclear weapons. It is important to note that nuclear capabilities will be accomplishing multiple purposes simultaneously.

The current threat environment means that the United States and its allies and partners are in multiple conflict continuums simultaneously. Each individual crisis/conflict involves a different primary adversary. This means the efficacy of nuclear strategy and posture must also account for the multiple continuums.

To achieve the roles, weapons may be used to generate effects, both physical and cognitive. Physical effects are those that change conditions in the ongoing crisis or conflict. For clarity, physical effects describe the results of the detonation of a nuclear weapon (e.g., a target was destroyed). Cognitive effects are those that affect decision-making. These effects are not independent and occur simultaneously. For example, employing a nuclear weapon on a battlefield will cause damage and casualties (a physical effect) and will also likely affect perceptions of stake in a conflict (a cognitive effect). If an adversary chooses to withdraw its forces after a threatened nuclear weapon use, the adversary action resulted from a cognitive effect. If an adversary chooses to withdraw its forces after being struck by a nuclear weapon, the adversary action resulted from both a physical effect and cognitive effect.

As the conflict continuum suggests, there is a temporal dimension (expanded below) to these effects which highlights the need to consider the totality of the crisis/conflict continuum when striving to understand the utility of an action.

- Physical effects (resulting from the detonation of a nuclear weapon) affect:
 - a. actual conditions during the conflict.
 - b. actual conditions post conflict.

- Cognitive effects (resulting from a threatened or actual use of a nuclear weapon) can affect participant³¹¹ perception of the following during:
 - a. the pre-conflict before entering a conflict.
 - b. the conflict of the ongoing conflict.
 - c. the conflict of the post-conflict geopolitical environment.

For example, assume the United States nuclear force has sufficient capacity to inflict physical effects (i.e., damage) upon an adversary that the adversary deems unacceptable. This capacity will cast a nuclear shadow onto adversary perceptions regarding engaging in a crisis/conflict with the United States. It will also cast a shadow onto adversary perceptions during the conflict (e.g., regarding escalation). And it will cast a shadow regarding perceptions of the post-conflict environment. This is all in the cognitive domain. If the president chooses to execute an option to inflict intolerable costs, it will affect the actual conditions during and after the conflict. This purposefully simplistic example highlights deterrence (i.e., influencing adversary perceptions regarding a decision they are contemplating) and achievement of an objective (e.g., imposing unacceptable damage). It also highlights that multiple purposes will likely be affected by the threat or employment of a nuclear weapon.

Wartime Employment: to What Ends?

A presidential decision to threaten employment or employ nuclear weapons in extreme circumstances is likely to be driven by a desire to create both physical and cognitive effects in pursuit of a broad set of deterrence, assurance, and defeat objectives.

Deter adversaries

For deterrence, the cognitive and physical effects discussed above are meant to influence adversary perceptions regarding a decision they are contemplating so that the adversary chooses not to take the action (i.e., they choose restraint).³¹² The Deterrence Operations Joint Operating Concept (DO JOC)³¹³ describes four categories of perceptions: the cost and benefit of taking an action and the cost and benefit of not taking an action. The assessment of these costs and benefits considers not only the immediate implications but also the possible costs and benefits in the future.³¹⁴ These perceptions are adversary and scenario specific. For example, deter adversary X from using a nuclear weapon in conflict. A collection of perceptions for a particular

311 Participant refers to adversary, allies, and the United States.

312 The United States may be simultaneously deterring an adversary from further escalation while compelling an adversary to stop their current actions.

313 *Deterrence Operations Joint Operating Concept* (DO JOC), V2.0 (December 2006), pp. 20-22.

314 See discussion of Japanese decision regarding attacking Pearl Harbor in DO JOC. *Deterrence Operations Joint Operating Concept*, V2.0 (December 2006), p. 21

scenario is labeled a “decision calculus”.³¹⁵ It is necessary to note that these perceptions likely shift across the conflict continuum.³¹⁶ This shift can either be in how important a perception is or the likelihood that it will be realized. In shorthand, different decision calculi are required for different points in the conflict continuum.

Nuclear weapons can affect adversary perceptions of the cost they might suffer (cost imposition) and benefits that might be denied (benefit denial). Nuclear weapons create cognitive effects that influence adversary decision-making. This likely occurs through two mechanisms: via the simple existence of the force (i.e., the nuclear shadow) and via actions or statements made regarding the nuclear force. During the Cold War, participants had acknowledged mutually assured destruction (an example of the nuclear shadow) and both sides tested and exercised their forces to demonstrate credibility in the force (an example of actions taken short of detonating a weapon). Actions also include statements about what a country might or might not target. Other mechanisms include demonstrating a commitment to sustain and modernize the force (i.e., ensuring the ability to impose costs and deny benefits for the foreseeable future) and enhancing the certainty of response [i.e., having a robust command and control capability and operational plans (even if the details of those plans are not released)]. There is also something to be said for Thomas Schelling’s concept of “the threat that leaves something to chance” (i.e., convincing the adversary they cannot know in advance the outcome of a conflict and thus cannot control a conflict).³¹⁷

Assure Allies

For assurance, the cognitive and physical effects are meant to influence allied and partner perceptions regarding the credibility of U.S. commitments to them. One mechanism through which this occurs is extended deterrence (simply stated as the application of U.S. nuclear policy and posture to deter an adversary from threatening or affecting the security of an ally or partner). Similarly to deterrence, assurance, and extended deterrence result from several mechanisms, including the mere existence of the nuclear force (the nuclear shadow) and actions and statements made by U.S. leaders. What matters here is the judgment of the leaders and publics of nations allied with the United States; credibility is in the eye of the beholder.

As with deterrence, this examination needs to occur across the spectrum of conflict and adversary decisions. For example, a counter city threat at the cusp of existential deterrence failure may be sufficient to deter an adversary and thus assure an ally. But that same threat at the cusp of strategic deterrence failure may not be viewed as credible by the adversary or the ally and an ally may not be assured.

315 Ibid., p. 20.

316 This is recognized as a risk to the Deterrence Operations Concept, specifically, “An adversary’s deterrence calculations are dynamic, changing over time as the strategic context and operational situation changes.” Ibid., p. 51.

317 Thomas Schelling, “The Threat that Leaves Something to Chance,” RAND historical document (1959). Challenge here is doing this in a manner that has acceptable risk for you but unacceptable risk for your opponent.

Achieve the President's Objectives if Deterrence Fails³¹⁸

If deterrence fails and war and/or escalation occurs, the president may turn, in extreme circumstances, to nuclear weapons to achieve his/her objectives. Each president provides specific guidance to the Department of Defense, which is necessarily classified. But a basis for discussion can be found in the unclassified reports to Congress on nuclear employment guidance,³¹⁹ previous guidance that has been declassified,³²⁰ statements by foreign leaders,³²¹ and various think tank and academic publications.³²²

Historically unclassified or previously declassified literature suggests four broad categories of national objectives if deterrence fails. These are to:

1. Affect the ongoing conflict at the tactical/operational level³²³
2. Restore deterrence, manage escalation³²⁴

318 See Greg Weaver's chapter in this volume for additional discussion of these objectives. For ease of linking these two chapters conceptually, we have used similar phrasing of the objectives.

319 See, for example, *Report of the Nuclear Employment Strategy of the United States – 2020* and *Report on the Nuclear Employment Strategy of the United States* (July 12, 2013), 2018 *Nuclear Posture Review*, Office of Secretary of Defense (February 2018), and 2022 *Nuclear Posture Review*, Office of Secretary of Defense (October 2022).

320 See, for example, Memorandum for the Assistant to the President for National Security Affairs, Subject: Response to NSSM 169 (July 13, 1973).

321 See, for example, Vladimir Putin's statements at the Valdai International Discussion Club (October 4, 2023), [HTTPS://en.kremlin.ru/events/presidents/news/72444](https://en.kremlin.ru/events/presidents/news/72444), and North Korea's law on policy on nuclear forces (adopted in September 2022).

322 See, for example, Matthew Kroenig, "Deliberate nuclear use in a war over Taiwan: Scenarios and considerations for the United States," Atlantic Council (November 20, 2023), Mark Gallagher, "Proposed approach to evaluate the deterrence of limited nuclear attacks," *J. Military Studies* 1, no. 1 (2024), pp. 1-14, and various pieces in this volume (e.g., Weaver chapter).

323 Weaver's chapter breaks this objective into "compensating for U.S./allied conventional inferiority" and "denying the adversary victory in theater conflict following adversary limited nuclear escalation." As noted, this objective is derived from multiple sources; a few are listed here. From the *Report on the Nuclear Employment Strategy of the United States*, November 7, 2024 (submitted to Congress pursuant to 491(a) of Title 10, U.S. Code): "Adaptive nuclear planning is required to facilitate integration with non-nuclear planning; support a flexible, responsive, and tailored nuclear strategy; and enable effective employment of nuclear weapons in a conflict." From the November 30, 2020 version of the 491 *Report*: "The United States believes currently that the most likely scenario for adversary nuclear employment is a limited nuclear strike in the context of an escalating conventional conflict. In the face of a limited nuclear attack against the United States, its allies, or its partners, U.S. nuclear forces provide a range of response options in scope and scale." From *Policy Guidance for the Employment of Nuclear Weapons* (NUWEP), June 1982, p. 4: "Our nuclear forces must be capable of attacking effectively a wide range of targets and crippling the capability of the Soviet Union and its allies to conduct effective military operations." These documents are available at https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/NCB/21-F-0591_2020_Report_of_the_Nuclear_Employment_Strategy_of_the_United_States.pdf and https://www.archives.gov/files/declassification/iscap/pdf/2013-111-doc01.pdf?_ga=2.174356194.1532941271.1743536747-1235746811.1743536747.

324 This objective too is derived from multiple documents, including the following. From the 491 *Report* of November 7, 2024: "The Guidance requires that all plans for responding to limited nuclear attack or significant, high-consequence non-nuclear attack that has strategic-level effect include an associated concept for favorably managing escalation, including reducing the likelihood of a large-scale nuclear attack against the United States or its allies and partners. This escalation management is increasingly important as the operating environment becomes more complex and creates the possibility of pathways for conflict escalation that may not be well understood or easy to predict." From NSDM 242, January 17, 1974, p. 2: "Should the conflict occur, the most critical employment objective is to seek early war termination, on terms acceptable to the United States and its allies, at the lowest level of conflict feasible. This objective requires planning a wide range of limited nuclear employment options which could be used in conjunction with supporting political and military measures (including conventional forces) to control escalation." The 2024 491 *Report* is available as noted above. NSDM 242 is available at <https://history.state.gov/historicaldocuments/frus1969-76v35/d31>.

3. Limit damage to the United States and its allies and partners³²⁵
4. Imposing unacceptable damage on an adversary³²⁶

While the objectives can be placed in separate bins, any action taken towards a single objective will likely affect multiple objectives.

Affect the ongoing conflict at the tactical/operational level: The president may seek to win the conflict outright, stave off defeat, or reset the conflict somewhere in between the two endpoints. Consider a hypothetical adversary use of a nuclear weapon in a conflict on a country's air bases and a response that strikes the first user's air bases. The first user may perceive the strikes on the airbase are necessary to not lose the conflict due to the air superiority of the second country. The second country's response may be designed to damage the first's air forces to reestablish the second's air dominance (i.e., reset the conflict). Conceptually, the concepts of "not lose the conflict" and "reset the conflict" were part of the logic of the West's reliance on nuclear capabilities to offset Soviet/Warsaw Pact conventional superiority. The far end of the scale is using nuclear weapons to win or hasten winning a conflict. This may be driven by a perception of necessity if a country perceives its conventional forces are insufficient to win or a perception that nuclear use will enable a less costly victory (e.g., U.S. use at the end of World War II).

Restore deterrence, manage escalation: Closely linked to the concept of affecting a conventional conflict is employment aimed at managing escalation of the conflict. Specifically, such employment would be intended to compel the adversary to stop strategic attacks and/or deter more significant attacks (i.e., deter escalation). An expansion of the example nuclear exchange on air bases above will illustrate the close linkage between these two objectives. Consider the response by the 2nd country to adversary nuclear use on its air bases. As discussed above, the purpose might be to affect the ongoing conflict at the tactical/operational level (i.e., reset the balance of air power). The purpose might also be to deter future strikes by demonstrating to the 1st country that they gained nothing using nuclear weapons (i.e., denied the benefit of the attack). Thus, while the objectives can be separated for academic reasons, any actual use of a nuclear weapon would have effects across multiple objectives.

Limit damage to the United States and its allies and partners: Multiple characteristics of an adversary's ability to inflict damage should be considered.

325 This objective too is derived from multiple documents, including the following. From the 491 Report of November 7, 2024: "It also instructs that the United States seeks to end any conflict at the lowest level of damage possible on the best achievable terms for the United States and its allies and partners...It also reiterates the need to maintain counterforce capabilities to reduce potential adversaries' ability to employ nuclear weapons against the United States and its allies and partners..." From NDSM 242, January 17, 1974: "Employment plans should be developed which provide to the degree practicable with available forces for the following.... (3) limitation of damage to those political, economic, and military resources critical to the continued power and influence of the United States and its allies" (as cited in the preceding note).

326 This objective too is derived from multiple documents, including the following. From the 491 Report of November 7, 2024: "The Guidance continues to emphasize the need to, first and foremost, hold at risk what adversaries value most." From Presidential Directive NSC 59, July 25, 1980: "We must be capable of fighting successfully so that the adversary would not achieve his war aims and would suffer costs that are unacceptable." Available at <https://history.state.gov/historicaldocuments/frus1977-80v04/d208>.

There is a temporal characteristic (e.g., limit the adversary's ability to inflict damage in the existing conflict vs. limit the adversary's ability to inflict damage at some point in the future), a geographic characteristic (e.g., limit an adversary's ability to inflict damage regionally vs. globally), and limit an adversary's ability to inflict damage via other elements of national power (e.g., economics or informational). As an example, consider the application of nuclear weapons against an adversary's nuclear capabilities. Striking an adversary silo, if the adversary doesn't launch out from under the attack, this will limit the immediate global damage an adversary can inflict. Or consider the application of a nuclear weapon on an adversary's strategic bomber base. If the planes are still on the base, it will limit the adversary's ability to be an immediate threat—and destroying the base also limits the adversary's ability to recover and reemploy the bombers (i.e., reduced the adversary's ability to be a near-term threat). Lastly, consider a strike on a facility that produces the bomber. This strike will limit the adversary's ability to reconstitute its bomber force (i.e., limits its ability to be a threat in the future). These examples highlight the application on an adversary's nuclear forces, but the same construct can apply to the application of nuclear weapons on its conventional forces. Here too, any employment conducted for the purpose of achieving this objective will likely affect other objectives as well.

Impose intolerable costs on an adversary: This requires a deep understanding of the adversary value structure using all available intelligence. As above, this objective category overlaps with other objective categories. For example, if an adversary values their nuclear forces destroying them may impose intolerable costs on the adversary. It simultaneously reduces the adversary's ability to be an immediate, near-term and post-conflict threat.

These broad categories of objectives provide a macro level overview regarding what might be considered. Inclusion here does not mean it is currently being done. Rather it means it is a plausible objective. All are viable under the Law of Armed Conflict, but the details matter here.³²⁷ As noted above, the list is not exhaustive nor mutually exclusive in application. It is meant to provide a framework when considered plausible employment objectives.

Countervalue versus Counterforce targeting

The previous section described the range of plausible objectives a president may be striving to achieve via threatening the employment or actually employing nuclear weapons in extreme circumstances. The following sections turn to the question of what types of targets might be threatened or struck to create the desired physical and cognitive effects. Specifically, how salient for these various objectives are the

³²⁷ For example, see Brad Clark's piece in this volume and Theodore Richard, "Nuclear Weapons Targeting: The Evolution of Law and U.S. Policy," *Military Law Review* 224, no. 4, pp. 862-978.

countervalue and counterforce targeting approaches?³²⁸ For the purposes of this analysis, the following definitions are the starting point:³²⁹

- Countervalue: “being or relating to military activity that is focused on attacking targets of civilian value (such as major population centers)”³³⁰
- Counterforce: “being or relating to military activity that is focused on reducing the fighting capability of the opponent’s forces (as by destroying military bases or weapons) while attempting to minimize civilian casualties”³³¹

Parsing the definitions shows that both describe what is to be attacked: “civilian value” (e.g., “major population centers”) for countervalue and “fighting capability of opponent’s forces” (e.g., “destroying military bases or weapons”) for counterforce. The box below contains further delineation of what types of targets might fall into each category.

Table 1. Examples of What Might be Targeted

Counterforce category	Countervalue category
Adversary nuclear capabilities <ul style="list-style-type: none">• Deployed nuclear forces (e.g., silos, airbases, mobiles)• Supporting infrastructure (e.g., operating bases, repair facilities)• Production facilities (e.g., weapons fabrication, platform production) Adversary non-nuclear capabilities <ul style="list-style-type: none">• Deployed non-nuclear forces (e.g., ships at sea, deployed forces)• Supporting infrastructure (e.g., operating bases, repair facilities)• Production facilities (e.g., weapons fabrication, platform production)	Cities Economic basis <ul style="list-style-type: none">• Financial infrastructure• Non-military production facilities Components of a modern society <ul style="list-style-type: none">• Information systems (e.g., server farms)• Public services (e.g., water supplies)

While these definitions appear clear they are not in practice, as intent can move the same target from the countervalue to counterforce category. An example may help. Consider the targeting of a power plant. If the intent is to limit an adversary’s ability to reconstitute its military, it is likely in the counterforce category. But if the intent is to destroy those things that facilitate a modern society (most likely in violation of the

328 A key premise here is that counterforce and countervalue are ways to pursue and possibly achieve an objective if they are not objectives.

329 For a more in-depth treatment of the definitions, please see several other pieces in this volume.

330 Merriam Webster online dictionary, “countervalue.” <https://www.merriam-webster.com/dictionary/countervalue>. Accessed June 26, 2024.

331 Merriam Webster online dictionary, “counterforce.” <https://www.merriam-webster.com/dictionary/counterforce#h2>. Accessed June 26, 2024.

law of armed conflict), it is likely in the countervalue category. The net effect is the same regardless, the power plant is destroyed, and military production and a modern society are both negatively affected. The example suggests that categorization is best handled on a case-by-case basis (which is beyond the scope of this paper).

This “case-by-case” requirement likely results in a “it depends” assessment of the applicability of a particular targeting approach (i.e., counterforce or countervalue) to achieving the discussed objectives. “It depends” on how a particular target is categorized. This, of course, is wholly unhelpful in the exploration of the issue. Thus, for the remainder of the paper the following narrower definitions will be used. Countervalue targets are defined as population centers and counterforce targeting are defined as fielded nuclear and conventional forces, operating bases, and storage locations.

Linking purposes to targeting approach

The tables below, while not exhaustive, explore the question of achieving the posited national objectives, via the creation of cognitive and physical effects, by threatening and/or targeting facilities in these two categories. They do so by examining the effects of different targeting approaches at three points in the conflict continuum: cusp of conflict initiation, cusp of strategic deterrence failure and post-strategic deterrence failure, and cusp of existential deterrence failure.

Table 2 examines the credibility of a countervalue and a counterforce targeting approach at the cusp of conflict initiation. In all cases, a counter population targeting approach is highly questionable (i.e., most likely illegal) under the Law of Armed Conflict.³³² In general, a countervalue approach likely lacks credibility from a deterrence and assurance perspective.

Table 2. Phase of Continuum: Cusp of Conflict Initiation

Purpose	Targeting Approach	
	Countervalue	Counterforce
Deter	Low credibility in initial stages of continuum, increased credibility at cusp of existential deterrence failure (cast a shadow backwards through continuum)	Broader range of response options enhances credibility
Assure	Allies may question the credibility of extended deterrence via a Counter-population approach	Demonstrates an ability to directly counter adversary ability to threaten an ally
Achieve Objectives	n/a Achieving objectives if deterrence fails occurs post-conflict initiation. However, the capacity to achieve objectives casts a shadow over adversary perceptions regarding conflict initiation	

³³² See Brad Clark’s paper in this volume for a discussion on this issue.

Table 3 examines the two targeting approaches at the cusp of strategic deterrence failure and post-strategic deterrence failure in the conflict continuum. In addition to

Table 3.Cusp of Strategic Deterrence Failure & Post-Strategic Deterrence Failure

Purpose	Targeting Approach	
	Countervalue	Counterforce
Deter	Threatening population centers in response to an initial strategic failure (or target post-failure) likely has low credibility	Broader range of response options enhances credibility
Assure	Allies may question the credibility of extended deterrence via a Counter-population approach	Demonstrates an ability to directly counter adversary ability to threaten an ally
Achieve Objectives		
1) Affect the ongoing conflict at the operational/tactical level (e.g., not lose conflict, reset conflict, win conflict)	Targeting population centers will not directly achieve this purpose (may be indirectly achieved via escalation management)	Targeting forces will directly affect the ongoing conflict
2) Restore deterrence, manage escalation	The two mechanisms to achieve these objectives would be via striking a small number of population centers (i.e., impose a cost) while demonstrating the adversary has more to lose. This will have low credibility as a threat and is unlikely to work if executed. Further, it entails significant risk of catalyzing a retaliatory response on your own cities	Several mechanisms to achieve these objectives via targeting a broad range of military capabilities include imposing a cost, denying benefits, demonstrating they have more to lose, exposing a vulnerability, and enabling a response in unanticipated ways, etc.
Compel adversary to stop		
Deter further escalation		
3) Limit damage to the U.S. and its allies and partners	Targeting population centers will not directly achieve this purpose (may be indirectly achieved via escalation management and collateral damage on industry within a city)	Broad set of plausible targets: fielded forces, logistic locations, storage, etc. to directly achieve these objectives
Military: non-strategic		
Immediate		
Near term		
Post conflict		
Military: strategic		
Immediate		
near term		
post conflict		
Geopolitical		Targeting forces undermines a key basis of geopolitical power
4) Impose unacceptable damage on an adversary	Likely not a credible objective at this point in the conflict (however, both approaches demonstrate the capacity to do so, thus they may affect how an adversary perceives escalation dynamics)	

the above-mentioned credibility challenges, a countervalue approach falls short in providing options to the president should deterrence fail. Specifically, a countervalue approach must rely on escalation management to address the plausible objectives of affecting the ongoing conflict at a tactical level and limiting the adversary's ability to be a threat. Additionally, targeting a small number of cities for escalation management purposes likely carries significant escalatory risks (e.g., it likely invites retaliatory strikes back on your own cities). Lastly, at this point in the conflict continuum, threatening intolerable costs is likely not credible (though the capability to do so at the cusp of existential deterrence failure will cast a shadow over an adversary's decision calculus at these two points).

It is important to note that targeting approaches are just one component of U.S. strategy to achieve a purpose. For example, below are five ways to pursue the purpose of limiting the adversary's ability to damage the United States and its allies and partners. Of the five, two are not affected by the choice of targeting approach (specifically, the first and fourth listed ways). The United States has long employed all five ways in its national security strategy.

1. Shape the environment (e.g., reduce offensive threats via arms control)
2. Render the adversary unwilling to attack (e.g., deter via threatening sufficient cost imposition)³³³
3. Render the adversary unwilling to continue (e.g., via escalation management)
4. Render the adversary attack ineffective (e.g., via civil defense or defenses)
5. Render the adversary incapable of continuing (e.g., via counterforce strikes)

Table 4 examines the two targeting approaches at the cusp of existential deterrence failure (e.g., a large-scale nuclear attack). A counter-population targeting approach at this stage in the conflict does not suffer as significant credibility concerns. Also, at this point in the conflict continuum, the objective of affecting the ongoing conflict at the tactical level is likely now a minor concern. Limiting the adversary's ability to be a threat using a counter population approach must rely on escalation management (which has been unsuccessful if this point is reached) and/or the hypothesis that if a country's population centers are destroyed, they will lack the capacity to continue fighting or rebuild the capability to be a military threat. History calls this into question.³³⁴

333 Note, if one holds that the adversary values their nuclear forces such that attacking them enables inflicting sufficient cost imposition then Way B to "deter adversary" and Way E to "render adversary incapable of continuing" are somewhat duplicative.

334 Consider the destruction of cities during World War II. Note, the key difference here is the destruction occurs over the course of a few hours vice a few years.

Table 4.Cusp of Strategic Deterrence Failure & Post-Strategic Deterrence Failure ³³⁵

Purpose	Targeting Approach	
	Countervalue	Counterforce
Deter	Threatening population centers to deter existential attack is likely plausible	Broader range of response options enhances credibility but threatening only forces may be insufficient
Assure	Allies may question the credibility of extended deterrence via a Counter-population approach	Demonstrates an ability to directly counter the adversary's ability to threaten an ally
Achieve Objectives		
1) Affect the ongoing conflict at the operational/tactical level (e.g. not lose conflict, reset conflict, win conflict)	At the cusp of existential deterrence failure affecting the ongoing conflict is a minor concern	
2) Restore deterrence, manage escalation	The two mechanisms to achieve these objectives would be via striking a small number of population centers (impose a cost) while demonstrating the adversary has more to lose. This will have low credibility as a threat and is unlikely to work if executed. Further, it entails significant risk of a catalyzing a retaliatory response on your own cities	Several mechanisms to achieve these objectives via targeting a broad range of military capabilities to include impose a cost, deny benefits, demonstrate they have more to lose, expose a vulnerability, enable responding in unanticipated ways, etc.
Compel adversary to stop		
Deter further escalation		
3) <u>Limit damage to the U.S. and its allies and partners</u>	Targeting population centers will not directly achieve this purpose (may be indirectly achieved via escalation management) and it raises the risk of a counter city response by the adversary	Broad set of plausible targets: fielded forces, logistic locations, storage, etc. to directly achieve these objectives
Military: Non-strategic		
Immediate		
Near term		
Post conflict		
Military: Strategic		
Immediate		
Near term		
Post conflict		
Geopolitical	Large-scale destruction of adversary population centers will likely prevent them from being a geopolitical threat	Targeting forces undermines a key basis of geopolitical power
4) Impose unacceptable damage on an adversary	At this point, credibility of this threat (assuming the adversary values population centers) has increased; however, credibility remains in question. For example, you still have significant value that could be threatened in response, thus undermining credibility of the threat.	Credible threat at this stage

335 A large-scale counterforce attack, while significant in the damage inflicted, may not be existential.

Conclusions

Counterforce and countervalue are useful terms for describing categories of targets that might be threatened for deterrence and compellence purposes or be struck to achieve objectives if deterrence fails. But the terms are not useful as descriptors of strategy. This paper has attempted to demonstrate this by articulating that nuclear weapons create both cognitive and physical effects that can be utilized for deterrence, assurance, and achieving the president's objectives if deterrence fails. These effects are used across the conflict continuum. A specified targeting approach (i.e., countervalue or counterforce) is a way to create those cognitive and physical effects. The credibility of the two approaches varies across the conflict continuum and the countervalue approach suffers from credibility concerns across much of the continuum. Lastly, there are other ways to achieve those effects than just threatening or employing nuclear weapons. Thus, a holistic approach is necessary when examining the sufficiency of strategy choices.

The Role of Counterforce Targeting in Alternative Strategies for the Two-Peer Threat Environment

Greg Weaver

Introduction

The threats a nation faces and the role of nuclear weapons in the strategy that a nation adopts to address those threats ideally drive nuclear force requirements and nuclear force posture. The United States faces a fundamental decision about what our strategy will be for addressing two nuclear peer adversaries in the 2030s, and what the role of nuclear weapons will be in that strategy. This strategy decision cannot wait, for if the strategy we choose requires a U.S. nuclear force that is bigger or different, or bigger and different than the one we currently have planned for, then we need to know that now. Delaying this strategy decision will risk not having the nuclear forces we require when the two-peer threat fully manifests.

A key element of the strategy choice we face is the extent to which our strategy involves counterforce targeting. The roles that counterforce capabilities and operations play in our future strategy will have a major impact on the nature and size of the nuclear forces required to enable it.

This chapter examines the potential value of nuclear counterforce capabilities and operations in the impending two nuclear-peer threat environment. It does not analyze current U.S. nuclear strategy, nor does it recommend alterations to its strategy. Rather, it posits four illustrative U.S. nuclear strategies³³⁶ with different roles for U.S. counterforce capabilities and operations. It then assesses the pros and cons of each strategy. Finally, it evaluates the potential impact of the variance in the role of counterforce capabilities and operations on the nuclear force structure and posture necessary to enable each strategy.

For the purposes of this chapter I have defined “counterforce” as the targeting of an adversary’s operational military capabilities of any kind, nuclear or conventional. This includes the potential targeting of an adversary’s military command and control capabilities, nuclear or conventional. I do not include the targeting of an adversary’s defense industrial infrastructure under the “counterforce” rubric, however. While such targeting is potentially legal, industrial infrastructure does not constitute forces per se.

Key Historical Elements of U.S. Nuclear Strategy

Strategy development begins with political choices about which objectives the strategy must address (and which it will not address, which requires an explanation). Different combinations lead to different operational requirements. This section

³³⁶ “Nuclear strategy” is defined as that portion of the nation’s strategy that sets forth the roles of, and objectives for the use of, nuclear weapons in the nation’s broader national defense strategy.

catalogues a number of potential historical objectives, based on a review of unclassified official sources and previously declassified sources. Drawing from these materials, this chapter identifies four illustrative U.S. nuclear strategies, explores how they may be able to address national objectives, and then assesses the impact of the varying roles of counterforce targeting in those strategies on those objectives.

1. Deterrence

There are three potential deterrence objectives U.S. nuclear strategy might be called on to address.

The first is deterring large-scale nuclear attack on the United States and its allies. Historically, U.S. nuclear strategy has addressed this objective by ensuring that U.S. nuclear forces pose a credible threat to impose intolerable costs on an adversary. This, of course, begs the question of what each potential adversary perceives as intolerable. That question has been addressed by extensive analysis seeking to identify what potential adversaries value most. Deterring large-scale nuclear attack on the United States and its allies thus may or may not require effective counterforce targeting of an adversary's nuclear forces, depending on whether the adversary highly values those forces and how the adversary perceives a U.S. counterforce threat to its nuclear forces affecting the potential for a conflict to escalate out of control.

While there has been significant policy debate over the answer to this question, it is ultimately an intelligence question. Deterring large-scale nuclear attack on the United States and its allies thus may or may not require effective counterforce targeting of an adversary's nuclear forces, depending on whether the adversary highly values those forces and/or perceives that U.S. counterforce capabilities make uncontrolled escalation more likely.

The second potential deterrence objective of U.S. nuclear strategy is deterring limited nuclear attack on the United States and its allies. Historically, U.S. nuclear strategy has addressed this objective by posing a credible threat to deny an adversary their objectives, impose costs that exceed what they can gain through limited nuclear attack, and to run the risk³³⁷ that conflict may escalate out of control.

The third potential deterrence objective of U.S. nuclear strategy, based on my historical review, is deterring large scale conventional aggression against the United States and its allies. U.S. nuclear strategy has addressed this objective by posing first a credible threat to deny the adversary their objectives, impose costs that exceed what they can gain through limited nuclear attack, and create risk that conflict will escalate out of control. When necessary, U.S. nuclear strategy has also addressed this objective by posing a credible threat to defeat adversary conventional forces with U.S. nuclear weapons use to compensate for U.S./Allied conventional inferiority. In the two nuclear peer-threat environment, this objective must include deterring three forms

337 This risk is what Thomas Schelling dubbed "the threat that leaves something to chance." Note that it does not involve directly threatening to escalate in an uncontrolled manner. Rather, it involves making clear through the U.S. response to limited nuclear escalation that the United States is willing to risk uncontrolled escalation in defense of its vital interests.

of large-scale conventional aggression: aggression by a single adversary, collaborative aggression by two adversaries simultaneously, and opportunistic aggression by a second adversary once the U.S. is engaged in major conflict with a first adversary. Because of the cost of fielding U.S. and allied conventional forces sufficient to defeat two major power adversaries simultaneously, it may be necessary to increase the role of U.S. nuclear forces in deterring either collaborative or opportunistic large-scale conventional aggression.

2. Assurance

There are two potential assurance objectives U.S. nuclear strategy might be called on to address. The first is convincing U.S. allies that U.S. extended deterrence guarantees are credible and reliable. The second is convincing U.S. allies (and possibly partners) that they do not need to acquire their own nuclear arsenal. U.S. nuclear strategy has addressed these objectives, historically, by maintaining a nuclear force posture that is viewed by allies as a credible deterrent to adversary aggression and by making clear the United States is credibly willing and able to use nuclear weapons in the defense of allies.

3. Achieving U.S. Objectives if Deterrence Fails

In order to identify potential nuclear employment objectives if deterrence fails, I have conducted an historical review of official sources or declassified U.S. government sources describing past or, where unclassified, present US nuclear strategy. As a result, I have identified five potential nuclear employment objectives, all of which are documented in these sources.

The first such employment objective is to compensate for U.S./Allied conventional inferiority.³³⁸ As noted by the Congressional Commission on the Strategic Posture of the United States, this may become a necessary element of U.S. nuclear strategy if the United States and allies cannot or will not field conventional forces capable of defeating both Russia and China simultaneously.

A second potential objective if deterrence fails, based on my historical review, is to restore deterrence and manage escalation following adversary limited nuclear

338 Sources for this objective include the following. From the *Annual Report to Congress, FY 1987*, Caspar Weinberger, p. 227: "If conventional defenses proved inadequate to stand the aggression, short range nuclear forces could aid and maintaining a cohesive forward defense." From the *Annual Report to Congress, FY 1988*, Caspar Weinberger, pp. 51: "since the end of World War II, our defense policy has continued to rely on US nuclear weapons to help the tour conventional attack as well, primarily because larger conventional forces are far more expensive than nuclear forces, and neither we know our allies are able to spend larger sums on defense." Ibid., pp. 217-218: "Our short-range nuclear forces help offset the Soviets massive advantage and conventional weapons, especially armor they force a dilemma upon the enemy commander: should he concentrate forces needed to break through NATO defenses and increase their vulnerability to nuclear attack, or disperse them to slowly attack momentum and increase the possibility of defeat." Available at: <https://history.defense.gov/Historical-Sources/Secretary-of-Defense-Annual-Reports/>

escalation.³³⁹ This objective has two related but different meanings. Restoring deterrence involves responding to adversary nuclear use in a way designed to convince them that they have miscalculated regarding how the United States would respond, that they should not have confidence in their ability to predict how the U.S. would respond if they escalate again, and that they should thus stop using nuclear weapons. Managing escalation involves ensuring that U.S. nuclear use intended to achieve other objectives also achieves this one by avoiding actions likely to result in vertical or horizontal escalation by the adversary. In order to achieve the subjective, the United States has historically maintained a range of credible “flexible response” options that deny an adversary their objectives, impose costs that exceed what they can gain through limited nuclear attack, and pose the risk that the conflict will escalate out of control if the adversary escalates further. This objective also requires U.S. response options designed to convince an adversary they have fundamentally miscalculated about how the United States would respond to limited nuclear escalation, and to shake their confidence in being able to predict how the U.S. would respond to further limited escalation. A third potential objective if deterrence fails, based on historical record, is to deny the adversary victory in the theater conflict

339 Sources for this objective include the following. From National Security Decision Memorandum (NSDM) 242, Richard Nixon, 1974, p. 2: “We must plan for flexibility in our forces and in our options for response, so that we might terminate the conflict on terms favorable to the forces of freedom and re-establish deterrent at the lowest possible level of violence, thus avoiding further destruction. Of course, this concept of seeking to enhance deterrent and limit the level of destruction by having flexible and enduring forces is not new. It has been squarely in the mainstream of American strategic thinking for over two decades.” See the *Report on the Nuclear Employment Strategy of the United States, 2020* (also known as the *491 Report to Congress*), p. 2: “If deterrence fails, the United States will strive to end any conflict at the lowest level of damage possible and on the best achievable terms for the United States, and its allies, and partners. One of the means of achieving this is to respond in a manner intended to restore deterrence. To this end, elements of U.S. nuclear forces are intended to provide limited, flexible, and graduated response options. Such options demonstrate the resolve, and the restraint, necessary for changing and adversaries calculus regarding further escalation.” Ibid., p. 7: “Should deterrence fail, the United States will strive to end any conflict at the lowest level of damage possible and on the best available terms for the United States, allies, and partners U.S. nuclear weapons employment guidance direct minimizing civilian damage to the extent possible consistent with achieving U.S. objectives and restoring deterrence.” Available at https://www.nixonlibrary.gov/sites/default/files/virtuallibrary/documents/nsdm/nsdm_242.pdf and https://www.esd.whs.mil/Portals/54/Documents/FOID/Reading%20Room/NCB/21-F-0591_2020_Report_of_the_Nuclear_Employment_Strategy_of_the_United_States.pdf.

following adversary limited nuclear use.³⁴⁰ Historically, U.S. nuclear strategy has addressed this objective by maintaining a range of credible “flexible response” options involving counterforce targeting designed to restore U.S./Allied military advantage, potentially paired with a promise of restraint regarding U.S./Allied objectives and war aims as appropriate.

A fourth potential objective if deterrence fails is to limit damage to the United States and its Allies/Partners.³⁴¹ Historically, U.S. nuclear strategy has addressed this objective by maintaining the capability to comprehensively target adversary nuclear

340 Sources for this objective include the following: From NSDM 242 as referenced above, pp. 2-3: “In the event that escalation cannot be controlled, the objective for employment of nuclear forces is to obtain the best possible outcome for the United States and its allies. To achieve this objective, employment plans should be developed which provide to the degree practical with available forces for the following: (1) maintenance of survivable strategic forces in reserve for protection and coercion during and after major nuclear conflict; (2) destruction of the political, economic, and military resources critical to the enemy’s post war power, influence, and ability to recover at an early time as a major power; (3) limitation of damage to those political, economic, and military resources critical to the continued power and influence of the United States and its allies.” From *National Security Decision Directive 13*, Ronald Reagan, 1981, p. 3: “In addition to the preplanned options, we must be able to develop, on short notice, immediate options for employment of nuclear forces, both strategic and theater, against targets of significant value (as, for example, ground formations) that emerge in the course of the developing conflict situation. This capability must encompass the rapid construction of plans that integrate the effective employment of strategic and the nuclear forces with general purpose forces for associated theater campaign objectives.” From *Presidential Directive 59*, Jimmy Carter, 1980, p. 1: “To this end and so as to preserve the possibility of bargaining effectively determinate the war unacceptable terms that are as favorable as practical, if deterrence fails initially, we must be capable of fighting successfully so the adversary would not achieve his war aims and would suffer costs that are unacceptable, or in any event greater than his gains from having initiated an attack.” From the *Annual Report to Congress, FY1980*, Harold Brown, p. 85: “We must remain equally skeptical of small scale nuclear demonstrations as the sovereign remedy—to be followed, if they do not work, by all-out nuclear exchanges. The capability for a small-scale demonstration should be preserved. But as long as the tactical nuclear forces are to serve as a major deterrent, they must be able to perform serious military missions. Such missions can generally be described as: Limited nuclear options designed to permit the selective destruction of fixed enemy military or industrial targets; regional nuclear options intended, as one example, to destroy the leading elements of an attacking enemy force; and theatre side nuclear options directed at aircraft and military bases, lines of communication, and troop concentrations in the first and follow-on echelons of an enemy attack.” NSDM 242 and FY1980 reports previously cited above. PD59 may be found at: <https://history.state.gov/historicaldocuments/frus1977-80v04/d208>

341 Sources for this objective include the following: *National Security Decision Directive 13*, Ronald Reagan, 1981, pp. 1-2: “Our nuclear forces (both the strategic Triad and theater forces), in conjunction with general purpose forces, must hold at risk the full range of enemy military capabilities that threaten the United States and its allies....To accomplish nuclear employment objectives, pre-planned attack options against the Soviet Union and its allies will be developed with the following general order of priorities for weapon allocation: strategic and the nuclear forces and associated C3I; national-level political and military leadership and the associated control structure; all other military forces, stationary and mobile, and associated C3I; industrial facilities which provide immediate support to military operations; and the industrial/economic base of the Soviet Union (and its allies).” *Presidential Directive 59*, Jimmy Carter, 1980, p. 3: “Overall targeting planning appropriate to implement a countervailing strategy will result in the capability to choose to put the major weight of the initial response on military and control targets. Military targets must be selected for the purpose of destroying enemy forces or their ability to carry out military operations. Strategic and theater nuclear forces should to the extent feasible be used in combination with, and in support of, general purpose forces to achieve that objective. More specifically, the following categories of military targets, with appropriate sub-options for different theaters, should be covered in planning: strategic and the nuclear forces, including nuclear weapons storage...” From the *Report on the Nuclear Employment Strategy of the United States, 2020*, p. 7: “Should a crisis escalate into a large scale nuclear attack on the United States or its allies and partners, the United States retains the option to pursue multiple objectives, from preventing further nuclear employment to inflicting intolerable costs on the adversary.” From the *Report on the Nuclear Employment Strategy of the United States, 2024*, p. 3: “The guidance continues to emphasize the need to, first and foremost, hold at risk what adversaries value most. It also reiterates the need to maintain counterforce capabilities to reduce potential adversaries’ ability to employ nuclear weapons against the United States and its allies and partners, and does not rely on a counter-value or minimum deterrent approach.” PD59 and 2020 report previously cited above. NSDD 13 available at <https://www.reaganlibrary.gov/research/finding-aids/executive-secretariat-nsc-national-security-decision-directives-nsdd-records> and the 2024 491 report is available at <https://media.defense.gov/2024/Nov/15/2003584623/-1/-1/1/REPORT-ON-THE-NUCLEAR-EMPLOYMENT-STRATEGY-OF-THE-UNITED-STATES.PDF>

forces as effectively as possible. This, of course, is a very demanding objective which requires counterforce capabilities and operations.

A fifth potential objective if deterrence fails in the historical record is to inflict intolerable costs on an adversary.³⁴² U.S. nuclear strategy has attempted to address this objective by seeking to identify what an adversary's leadership values most, and developing options to destroy those things with high confidence under any circumstances, including following a large scale adversary first strike on U.S. nuclear forces.

Having reviewed the range of potential U.S. nuclear strategy objectives in available unclassified and declassified sources, it is evident that there is considerable overlap between what is required to achieve U.S. deterrence, extended deterrence, and assurance objectives and what is required to achieve U.S. objectives if deterrence fails in some way. The importance of this observation will become more clear as we examine the alternative strategies and the role of counterforce capabilities and operations in each.

Four Illustrative U.S. Nuclear Strategies

Having identified the potential building blocks of strategy above, I can now combine them in various ways to compose illustrative nuclear strategies. I explore four such strategies below. These will then be used to examine the potential value of nuclear counterforce capabilities and operations in the impending two nuclear-peer threat environment. They are alternatives to each other; they are not, however, presented here as alternatives to, or variations on, existing U.S. strategy.

Before examining them in more detail, it is useful to provide a shorthand description of the core targeting principles of each strategy.

Illustrative Strategy 1: Minimum Deterrence Through Civil Society Targeting, No Counterforce

No counterforce targeting of adversary nuclear or conventional forces. Targeting of adversary civil society and economic infrastructure.

342 Sources for this objective include the following. From the Report on the Nuclear Employment Strategy of the United States, 2020, p. 7: "Should a crisis escalate into a large-scale nuclear attack on the United States or its allies or partners, the United States retains the option to pursue multiple objectives, from preventing further nuclear employment to inflicting intolerable costs on the adversary." From *Presidential Decision Directive 59*, Jimmy Carter, 1980, p. 1: "To continue to deter in an era of strategic nuclear equivalence, it is necessary to have nuclear (as well as conventional) forces such that in considering aggression against our interests any adversary would recognize that no plausible outcome would represent a victory on any plausible definition of victory. To this end and so as to preserve the possibility of bargaining effectively to terminate the war on acceptable terms that are as favorable as practical, if deterrence fails initially, we must be capable of fighting successfully so the adversary would not achieve his war aims and would suffer cost that are unacceptable, or in any event greater than his gains from having initiated an attack." From *Annual Report to Congress, FY1981*, Harold Brown, p. 65: "To achieve the objective we need, first of all, a survival and enduring retaliatory capability to devastate the industry and cities of the Soviet Union. We must have such a capability even if the Soviets were to attack first, without warning, and in a manner optimized to reduce that capability as much as possible. What has come to be known as assured destruction is the bedrock of nuclear deterrence, and we will retain such a capacity in the future." All items previously cited above.

Illustrative Strategy 2: Counterforce Only on Conventional Forces

Counterforce targeting limited to adversary conventional forces only.³⁴³ Add targeting of adversary defense industrial infrastructure (sometimes referred to as “war-supporting industry”).

Illustrative Strategy 3: Counterforce Only On Theater Nuclear and Conventional Forces

Counterforce targeting limited to theater nuclear and conventional forces only. Add targeting of defense industrial infrastructure.

Illustrative Strategy 4: Counterforce On All Adversary Nuclear Forces and Conventional Forces

Counterforce targeting of strategic and theater nuclear, conventional forces, and nuclear command and control. Add targeting of defense industrial infrastructure and adversary leadership.

Illustrative Strategy 1: Minimum Deterrence Through Civil Society Targeting, No Counterforce

Key Tenets of Illustrative Strategy 1

This strategy is based on the premise that the sole purpose of U.S. nuclear weapons is to deter adversary use of nuclear weapons. It relies on the threat of uncontrolled escalation to a large-scale nuclear exchange that results in the destruction of the adversary’s society to deter such adversary use, and therefore relies on “countervalue” targeting of an adversary’s civil society and critical infrastructure rather than counterforce targeting of the adversary’s military forces or targeting of the adversary’s defense industrial base.

This illustrative strategy does not purport to deter large-scale conventional aggression through the threat of U.S. nuclear use, as the sole purpose of U.S. nuclear weapons is to deter nuclear use. It seeks to assure U.S. allies by convincing them that the threat of the U.S. imposing intolerable costs on an adversary in response to adversary nuclear use will deter any adversary nuclear use.

Under this strategy the only U.S. objective if nuclear deterrence fails is to impose intolerable costs on the adversary’s civil society and critical infrastructure, based on the assumption that this is what all potential adversaries value most. This strategy does not seek to achieve any of the following U.S. objectives if deterrence fails:

- a. Compensate for U.S./Allied conventional inferiority
- b. Restore deterrence/Managing escalation

343 The nature and extent of nuclear targeting of an adversary’s conventional forces can range from very limited strikes in response to adversary limited escalation to restore deterrence/manage escalation or counter the military impact of adversary nuclear use, to the much more extensive strikes on conventional forces necessary to compensate for conventional inferiority, most likely in a second major power conflict.

- c. Deny the adversary victory in theater conflict following adversary limited nuclear escalation
- d. Limit damage to the U.S. and its Allies/Partners

The Role of Counterforce Targeting in Illustrative Strategy 1

This strategy has no role for counterforce targeting for deterrence, assurance, or achieving U.S. objectives if deterrence fails. The rationale for this strategy's approach to targeting is based on six core judgments.

First, counterforce targeting is not necessary for deterrence of nuclear use, as the adversary's military forces are not what they value most. Deterrence of nuclear use only requires holding an adversary's civil society and critical infrastructure at risk.

Second, counterforce targeting is not necessary to deter large-scale conventional aggression because U.S./Allied conventional forces can achieve that objective even in a simultaneous conflict with two peer adversaries, and the sole purpose of U.S. nuclear forces is to deter nuclear use.

Third, once the nuclear threshold is crossed, escalation to large-scale nuclear war is highly likely, making efforts to restore deterrence/manage escalation futile, and making planning for limited nuclear exchanges unnecessary.

Fourth, counterforce targeting cannot achieve meaningful damage limitation in a nuclear war.

Fifth, targeting an adversary's nuclear forces, nuclear command and control, and leadership risks undermining first strike stability by creating "use or lose" pressures on the adversary leadership. This makes nuclear war more likely.

Sixth, because counterforce targeting makes nuclear war more likely, it is not immoral to target an adversary's civil society and economic infrastructure. The moral superiority of a strategy more likely to prevent nuclear war trumps the immorality of purposely targeting civilians and civilian infrastructure, and makes the fact that doing so is a violation of the Law of Armed Conflict irrelevant.

The Pros and Cons of Illustrative Strategy 1

Pros:

- The threat of a large-scale U.S. nuclear strike against an adversary's civil society and economic infrastructure is likely to be a credible threat in response to a large-scale nuclear strike on U.S. civil society.
- However, it is unclear whether such a strike addresses what specific adversary leaderships value most.
- If effective in deterring adversary nuclear use, this strategy likely requires a smaller U.S. nuclear force structure, potentially making U.S. nuclear forces less expensive to field and operate.
- Depending on the U.S. nuclear force fielded to support this strategy, it may not be perceived to pose a preemptive counterforce threat to an adversary's

nuclear forces, thus avoiding creation of “use it or lose it” concerns for adversary leadership that could undermine first strike stability.

Cons:

- Adopting this illustrative strategy would require the United States to abandon its policy proscription against planning or conducting nuclear strikes that violate the Law of Armed Conflict. The core purpose of the U.S. nuclear force would be to threaten the commission of a war crime of unprecedented scale.
- The threat of a large-scale U.S. nuclear strike against adversary civil society might not be credible in response to a large-scale counterforce strike on U.S. nuclear forces, potentially undermining deterrence of such a strike. Such an adversary counterforce strike would cause large-scale civilian damage through fallout, but would leave most of U.S. civil society intact, and thus leave a U.S. president with far more to lose if s/he responded to it with a large scale attack on the adversary’s civil society and economic infrastructure.
- The threat of a large-scale U.S. nuclear strike against adversary civil society is unlikely to be credible in response to large-scale or limited adversary nuclear strikes on U.S. allies and partners. Such a U.S. response against a peer nuclear adversary would be suicidal. Thus, this strategy would profoundly undermine U.S. extended nuclear deterrence, and thus assurance of U.S. allies as well.
- Limiting the role of U.S. nuclear forces to deterring only adversary nuclear use arguably undermines deterrence of large-scale conventional aggression, and would prevent the United States from increasing reliance on nuclear weapons to compensate for conventional inferiority in a second major power conflict.
- This would either force the United States and its allies to dramatically increase their conventional forces to be able to fight and win two simultaneous major power conflicts, or risk failing to deter either collaborative or opportunistic aggression. The cost of U.S./Allied conventional forces capable of defeating Russia and China simultaneously would far exceed the cost savings from fielding the smaller U.S. nuclear force this strategy requires.
- The lack of limited U.S. nuclear counterforce options against adversary theater nuclear forces would make it more difficult to restore deterrence, manage escalation, deny the adversary victory in theater conflict following adversary limited nuclear employment, and limit damage to U.S. forces and our allies and partners. The lack of such options would also undermine assurance of U.S. allies, as noted above.

- The lack of large-scale U.S. nuclear counterforce options against adversary strategic nuclear forces would make it nearly impossible to limit damage to the U.S. homeland. This strategy's assumption that there is not a meaningful difference between the damage an adversary can or would inflict on the United States with or without a large-scale U.S. counterforce option is factually incorrect.

Impact of Illustrative Strategy 1 on Required U.S. Nuclear Force Structure/Posture

The nuclear force structure/posture required to enable this strategy must ensure that the United States fields survival nuclear forces that are sufficient to impose intolerable costs on potential adversaries' civil societies under all conditions. In the impending two nuclear-peer threat environment, a force sufficient to inflict such damage on Russia and China would be required, and "under all conditions" should include following a collaborative Russian and Chinese surprise counterforce strike.

Classified analysis would be required to determine if a force of the required size and composition would be small enough to alleviate a single adversary's potential concerns regarding a U.S. counterforce first strike. However, this is unlikely to be the case. If such analysis determined that the required U.S. force would not be small enough to do so, the purported "Pro" of this strategy regarding avoiding the creation of "use it or lose it" pressures would be negated, undermining one of the primary premises on which it is based.

Illustrative Strategy 2: Counterforce Only on Conventional Forces Key Tenets of Strategy 2

Illustrative strategy 2 purports to deter adversary nuclear use and large-scale conventional aggression by threatening to destroy critical adversary conventional forces and defense industrial infrastructure. It is based on the premise that this provides sufficient benefit denial and cost imposition to provide a range of options to deter limited nuclear use, and that destruction of defense industrial infrastructure alone would result in damage to an adversary's society that would be intolerable to an adversary leadership under all circumstances. This strategy purposely avoids targeting of adversary nuclear forces, nuclear command and control, and leadership in order to avoid creating "use or lose" pressures on adversary leadership, and to reduce the U.S. nuclear force required to address the two nuclear-peer threat environment. Strategy 2 seeks to assure U.S. allies by convincing them that the threat of the United States destroying key conventional force targets and defense industrial infrastructure in response to adversary nuclear use will deter all adversary nuclear use. The strategy calls for preparing a wide range of U.S. nuclear response options against these types of targets in order to deter or respond to any adversary nuclear use—from limited strikes to large-scale strikes.

Strategy 2 is based on the premise that providing a range of options to target only adversary conventional forces and defense industrial infrastructure can achieve the following U.S. objectives if deterrence fails:

- Restoring deterrence/Managing escalation
- Deny adversary victory in theater conflict following adversary limited nuclear escalation
- Compensate for U.S./Allied conventional inferiority

Illustrative strategy 2 does not address limiting nuclear damage to the United States and its allies/partners. It is based on the judgments that meaningful damage limitation is unachievable in a nuclear war, and that pursuing such a capability undermines first strike stability.

If nuclear deterrence fails, this strategy is based on the premise that targeting only adversary conventional forces and defense industrial infrastructure can achieve the objective of imposing intolerable costs on an adversary.

The Role of Counterforce Targeting in Illustrative Strategy 2

Strategy 2 only calls for counterforce targeting of adversary conventional forces. The rationale for this is based on three underlying judgments.

First, that counterforce targeting of adversary nuclear forces is not necessary for deterrence, as the adversary's nuclear forces are not among those things they value most. Deterrence requires counterforce targeting only of an adversary's conventional forces.

Second, that meaningful damage limitation is not achievable in a nuclear war, making counterforce targeting of adversary nuclear forces ineffective for this purpose.

Targeting an adversary's nuclear forces, nuclear command and control, and leadership poses a risk of undermining first strike stability by creating "use or lose" pressures on the adversary leadership. This makes nuclear war more likely.

Pros and Cons of Illustrative Strategy 2

Pros:

- If effective in deterring adversary nuclear use, this strategy likely requires a modestly sized nuclear force structure, potentially making U.S. nuclear forces less expensive to field and operate.
- If effective in deterring large-scale conventional aggression, or denying the adversary victory and the conflict following adversary limited nuclear escalation and compensating for U.S./allied conventional inferiority, this strategy could avoid the need to significantly increase U.S./allied conventional capabilities to address the two nuclear-peer threat.

- Depending on the U.S. nuclear force fielded to support this strategy, it may not be perceived to pose a preemptive counterforce threat to an adversary's nuclear forces, alleviating "use it or lose it" concerns of adversary leadership.
- Strategy 2 would allow the United States to retain its current policy that its nuclear targeting and operations will comply with the Law of Armed Conflict

Cons:

- The threat of U.S. strikes on the adversary's conventional forces and defense industrial infrastructure in response to a large-scale adversary strike on U.S. civil society and economic infrastructure might not be sufficient to deter such an attack.
- It is unclear whether such U.S. strikes would destroy what specific adversary leaderships value most, and thus unclear whether they would see them as imposing intolerable costs under all circumstances.
- Targeting adversary defense industrial infrastructure in accordance with the Law of Armed Conflict will do far less damage to adversary civil society and economic infrastructure than the deliberate targeting of these assets called for in Strategy 1.
- The threat of U.S. strikes on the adversary's conventional forces and defense industrial infrastructure in response to a large-scale counterforce strike on U.S. nuclear forces might not be credible or sufficient to deter such a strike.
- The adversary's threat to counterescalate to attacks on U.S. civil society with its remaining strategic nuclear forces could deter such a U.S. response.
- Communicating that the United States might conduct counterforce strikes against adversary conventional forces might contribute to deterrence of large-scale conventional aggression and could compensate for U.S./allied conventional inferiority in a second theater of major power conflict.
- But this is only true if Strategy 2 allows for such strikes in response to not only limited adversary nuclear use, but also conventional aggression itself.
- And it is also only true if the lack of U.S. counterforce options against adversary nuclear forces doesn't result in a failure to deter limited or large-scale nuclear escalation.
- The lack of U.S. nuclear counterforce options against adversary theater nuclear forces would make it more difficult to restore deterrence, manage escalation,

counter the military impact of adversary limited nuclear use, and limit damage to U.S. forces and our allies and partners.

- If an adversary losing a conventional conflict escalates to limited nuclear use to coerce war termination on terms he can accept,³⁴⁴ U.S. nuclear responses against only adversary conventional forces might incentivize the adversary to escalate to more expansive nuclear use without fear that their theater nuclear forces are at risk. Such U.S. strikes would exacerbate the very condition that led to adversary limited nuclear use in the first place.
- The lack of U.S. nuclear counterforce options against adversary strategic nuclear forces would likely reduce the credibility of “the threat that leaves something to chance” (i.e., the probability that continued adversary nuclear escalation might result in the conflict escalating out of control because the United States might decide to “go big first.”) U.S. escalation to large-scale nuclear use against adversary conventional forces and defense industrial infrastructure in response to either adversary limited nuclear use in theater or adversary preparation for a large scale counterforce attack against the United States would not be credible under any circumstances.
- The lack of large-scale U.S. nuclear counterforce options against adversary strategic nuclear forces would make it nearly impossible to limit damage to the U.S. homeland. This strategy’s assumption that there is not a meaningful difference between the damage an adversary can or would inflict on the United States with or without a large scale U.S. counterforce option is factually incorrect.

Impact of Illustrative Strategy 2 on Required U.S. Nuclear Force Structure/Posture

The nuclear force structure/posture to enable this 2nd illustrative strategy must ensure that U.S. nuclear forces sufficient to impose intolerable costs on adversaries’ conventional forces and defense industrial infrastructure can survive and effectively retaliate under all conditions. In the impending two nuclear-peer threat environment, a force sufficient to inflict such damage on Russia and China would be required, and “under all conditions” should include following a collaborative Russian and Chinese surprise counterforce strike.

The force structure/posture requirements needed to enable this strategy are critically dependent on the purposes served by U.S. counterforce strikes against adversary conventional forces. If the strategy calls only for limited strikes against conventional force targets at the operational level of war in order to deter limited nuclear escalation, restore deterrence/manage escalation, and/or counter the military

344 This is a known element of Russian nuclear strategy and doctrine, and may be adopted by China once its ongoing nuclear force buildup provides new low-yield theater nuclear capabilities with which to execute it.

impact of adversary limited nuclear use, then the impact on future force requirements will be significant, but not large.

But if the strategy calls for much more extensive strikes on a wide array of conventional force targets at the operational and tactical levels of war designed to compensate for conventional inferiority, most likely in a second major power theater of conflict, the impacts will be larger.

Classified analysis would be necessary to determine if a force of the required size and composition would be small enough to alleviate a single adversary's potential concerns regarding a U.S. counterforce first strike. However, this is unlikely to be the case. If such analysis determined the required U.S. force would not be small enough to do, so the purported "Pro" of this strategy regarding avoiding "use it or lose it" pressures would be negated, undermining one of the primary premises on which it is based.

Illustrative Strategy 3: Counterforce Only On Theater Nuclear and Conventional Forces

Key Tenets of Strategy 3

Illustrative strategy 3 seeks to deter adversary nuclear use and large-scale conventional aggression by threatening to destroy adversary theater nuclear and conventional forces, and defense industrial infrastructure.

The strategy purposely avoids the targeting of adversary strategic nuclear forces and their associated command and control (including adversary leadership).

Strategy 3 seeks to assure U.S. allies by convincing them that the threat of the U.S. destroying these targets in response to adversary nuclear use will deter all adversary nuclear use, and that U.S. counterforce strikes against adversary theater nuclear forces can limit damage to U.S. allies if deterrence fails. The strategy calls for preparing a wide range of U.S. nuclear response options against these types of targets to deter or respond to any adversary nuclear use, from limited strikes to large-scale strikes.

Strategy 3 is based on the premise that providing a range of counterforce options to target adversary theater nuclear and conventional forces can achieve the following U.S. objectives if deterrence fails:

- Restoring deterrence/Managing escalation
- Denying the adversary victory in the conflict following adversary limited nuclear escalation
- Compensating for U.S./Allied conventional inferiority

The strategy does not address limiting nuclear damage to the U.S. homeland. The strategy has the potential to limit nuclear damage to U.S. forward-deployed forces

and allies/partners by targeting theater nuclear forces. The effectiveness of achieving this would be in part a function of the size of the adversary's theater nuclear forces of various types. If nuclear deterrence fails, this strategy is based on the premise that targeting only adversary theater and conventional forces and defense industrial infrastructure can enable the United States to achieve the objective of imposing unacceptable damage on an adversary.

Role of Counterforce Targeting in Illustrative Strategy 3

Strategy 3 calls for counterforce targeting of only adversary theater nuclear and conventional forces. The rationale for this is based on four underlying judgments.

First, counterforce targeting of adversary strategic nuclear forces is not necessary for deterrence, as the adversary's strategic nuclear forces are not what they value most. Deterrence only requires counterforce targeting of an adversary's theater nuclear and conventional forces.

Second, targeting adversary theater nuclear forces is required to deter limited nuclear use and to restore deterrence/manage escalation because striking only adversary conventional forces in response does not address the most likely motivation for adversary limited nuclear use (coercing war termination because they are losing the conventional war). The strategy recognizes that striking only conventional forces in response may result in further adversary nuclear escalation.

Third, meaningful damage limitation is not achievable in a large scale nuclear war. This makes counterforce targeting of adversary strategic nuclear forces ineffective for this purpose.

Fourth, targeting an adversary's strategic nuclear forces risks undermining first strike stability by creating "use or lose" pressures on the adversary leadership. This makes nuclear war more likely.

Pros and Cons of Illustrative Strategy 3

Pros:

- If effective in deterring adversary nuclear use, this strategy likely requires a somewhat smaller U.S. nuclear force structure, potentially making U.S. nuclear forces less expensive to field and operate.
- If effective in deterring large-scale conventional aggression and compensating for U.S./allied conventional inferiority, this strategy could avoid the need to significantly increase U.S./allied conventional capabilities to address the two nuclear-peer threat.
- Depending on the U.S. nuclear force fielded to support this strategy, it may not be perceived as posing a preemptive counterforce threat to an adversary's strategic nuclear forces, alleviating "use it or lose it" concerns of adversary leadership regarding those forces.

- By including counterforce targeting of adversary theater nuclear forces, this strategy expands the range of U.S. response options to deter adversary limited nuclear use, reestablish deterrence/manage escalation, counter the military impacts of adversary limited nuclear use, and limiting damage to U.S. forward-deployed forces, allies, and partners.

Cons:

- The threat of U.S. strikes on the adversary's theater nuclear and conventional forces, and defense industrial infrastructure in response to a large-scale adversary strike on U.S. civil society might not be sufficient to deter such a strike.
 - It is unclear whether such U.S. strikes would destroy what specific adversary leaderships value most, and thus unclear whether they would see them as imposing intolerable cost under all circumstances.
 - Targeting adversary defense industrial infrastructure in accordance with the Law of Armed Conflict will do far less damage to adversary civil society and economic infrastructure than the deliberate targeting of these assets called for in Strategy 1.
- The threat of U.S. strikes on the adversary's theater nuclear and conventional forces as well as its defense industrial infrastructure in response to a large-scale counterforce strike on U.S. nuclear forces might not be credible or sufficient to deter such a strike.
 - The adversary's threat to counter escalate by attacking U.S. civil society and critical economic infrastructure with their remaining strategic nuclear forces could deter such a U.S. response.
- Communicating that the U.S. might conduct counterforce strikes against adversary theater nuclear and conventional forces might contribute to deterrence of large-scale conventional aggression and could compensate for U.S./allied conventional inferiority in a second theater of major power conflict.
 - But this is only true if Strategy 3 allows for such strikes in response to not only limited adversary nuclear use, but also conventional aggression itself.
 - And it is also only true if the lack of U.S. counterforce options against adversary strategic nuclear forces doesn't result in a failure to deter limited or large-scale adversary nuclear escalation.
- The strategy's lack of U.S. nuclear counterforce options against adversary strategic nuclear forces might reduce the credibility of "the threat that leaves something to chance" (i.e., the probability that continued adversary nuclear escalation might result in the conflict escalating out of control because the U.S. might decide to "go big first.") U.S. escalation to large-scale nuclear use against adversary theater

nuclear and conventional forces and defense industrial infrastructure in response to either adversary limited nuclear use in theater or adversary preparation for a large-scale counterforce attack against the United States would not be credible under any circumstances.

- The lack of large-scale U.S. nuclear counterforce options against adversary strategic nuclear forces would make it nearly impossible to limit damage to the U.S. homeland. This strategy's assumption that there is not a meaningful difference between the damage an adversary can or would inflict on the United States with or without a large-scale U.S. counterforce option is factually incorrect.

Impact of Illustrative Strategy 3 on U.S. Nuclear Force Structure/Posture

The nuclear force structure/posture needed to enable this strategy must ensure that sufficient U.S. nuclear forces to impose intolerable costs on adversary theater nuclear and conventional forces, adversary leadership, and defense industrial infrastructure can survive and effectively retaliate under all conditions. In the impending two nuclear-peer threat environment a force sufficient to inflict such damage on Russia and China would be needed, and “under all conditions” should include following a collaborative Russian and Chinese surprise counterforce strike.

The force structure/posture requirements to enable this strategy are critically dependent on the purposes served by U.S. counterforce strikes against adversary theater nuclear and conventional forces. If the strategy calls only for limited strikes against theater nuclear and conventional force targets at the operational level of war in order to deter limited nuclear escalation, restore deterrence/manage escalation and/or counter the military impact of adversary limited nuclear use, then the impact on future force requirements will be significant, but not large.

But if the strategy calls for much more extensive strikes on a wide array of conventional force targets at the operational and tactical levels of war designed to compensate for conventional inferiority, most likely in a second major power theater of conflict, the impacts will be larger.

Similarly, if the strategy calls for extensive strikes on a wide array of theater nuclear force targets, then Force requirements would increase, potentially significantly.

Classified analysis would be necessary to determine if a force of the necessary size and composition would be small enough to alleviate a single adversary's potential concerns regarding a U.S. counterforce first strike. If such analysis determined the necessary U.S. force would not be small enough to do so, the purported “Pro” of this strategy regarding avoiding “use it or lose it” pressures would be negated, undermining one of the primary premises on which it is based.

Illustrative Strategy 4: Counterforce On All Adversary Nuclear Forces and Conventional Forces

Key Tenets of Strategy 4

Illustrative strategy 4 is based on the following core premises:

A counterforce capability against adversary strategic nuclear forces and their command and control is necessary for deterrence because adversary leaderships highly value those forces and their own survival and fear the consequences of losing those forces and/or their lives.

There is a need for a wide range of U.S. nuclear options to deter and respond to adversary limited nuclear use for both deterrence and warfighting purposes across a complex range of scenarios in the two nuclear peer threat environment.

The ability to conduct nuclear counterforce strikes against adversary strategic nuclear forces is required for deterrence, escalation management, and damage limitation in the face of the two nuclear-peer threat. Counterforce capability against adversary strategic nuclear forces is necessary to deter limited nuclear use and large-scale conventional aggression because that capability makes the threat of a conflict eventually escalating out of control more credible to the adversary.

- This is in part because such counterforce capability provides the United States a more credible option to “go big first” in extremis, rather than wait to suffer an impending adversary preemptive counterforce strike, limiting the damage done to the U.S. to some extent.

This strategy seeks to assure allies by convincing them that fulfilling U.S. extended deterrence commitments does not require the United States to threaten to commit suicide, but rather requires the U.S. to be credibly willing to risk uncontrolled escalation in defense of U.S. and allied vital interests. It also seeks to provide assurance by ensuring that the U.S. has the capability to limit damage to the United States and our allies and partners if deterrence fails.

Illustrative strategy 4 provides U.S. nuclear options to achieve the full range of potential U.S. objectives if deterrence fails:

- Compensate for U.S./Allied conventional inferiority
- Restore deterrence/Managing escalation
- Denying the adversary victory in the conflict following adversary limited nuclear escalation
- Limit damage to the United States and its allies/partners
- Impose intolerable cost on the adversary

Strategy 4 is based on the premise that only by providing options to strike the full range of adversary strategic and theater nuclear and conventional forces, adversary leadership, and defense industrial infrastructure can the United States achieve the fifth potential U.S. objective of imposing intolerable cost on an adversary with high confidence.

Pros and Cons of Illustrative Strategy 4

Pros:

- Strategy 4 provides the president the broadest array of potential nuclear responses to adversary aggression for both deterrence and warfighting purposes.
 - It does not run the risk of undermining deterrence and/or reducing U.S. ability to limit damage to the United States by opting to not hold adversary strategic nuclear forces at risk.
 - It enhances the credibility of the three-part American strategy to deter limited nuclear use in a theater conflict by providing options that can deny the adversary his objectives, impose costs that exceed what he can achieve through limited use, and present the adversary with a more credible “threat that leaves something to chance.”
- Strategy 4 does not require the ability to preemptively negate an adversary's strategic nuclear deterrent. It recognizes that mutual assured destruction is a condition, not a strategy. It therefore arguably avoids posing the kind of disarming preemptive first strike capability that would create credible “use it or lose it” pressures on a major power adversary's leadership.
- Strategy 4 casts the darkest and longest nuclear deterrent shadow over an adversary's calculations regarding initiating aggression against the United States and its allies and partners by providing the president viable and legal response options at every level of violence.

Cons:

- This strategy would require the largest and most diverse U.S. nuclear force structure of the four strategies considered, making it the most expensive nuclear force to field and operate.
 - However, if it is effective in contributing to deterrence of opportunistic aggression in a second theater by a second nuclear peer adversary, its cost would be less than fielding and operating U.S. and allied conventional forces capable of defeating Russia and China simultaneously.
- It is possible that U.S. pursuit of this strategy could result in adversaries further increasing the size of their strategic nuclear forces to reduce U.S. strategic nuclear counterforce capability.

- However, the United States and Russia eventually reached agreement on limits on the size of their strategic nuclear forces that both met the requirements of U.S. nuclear strategy and did not pose a perceived disarming counterforce threat to Russia or the United States.

Impact of Illustrative Strategy 4 on Required U.S. Nuclear Force Structure/Posture

The nuclear force structure/posture needed to enable this strategy must ensure that sufficient U.S. nuclear forces to impose intolerable causes on adversary strategic and theater nuclear forces, conventional forces, adversary leadership, and defense industrial infrastructure can survive and effectively retaliate under all conditions. In the impending two nuclear-peer threat environment, a force sufficient to inflict such damage on Russia and China would be required, and “under all conditions” should include following a collaborative Russian and Chinese surprise counterforce strike.

Holding the full range of strategic forces targets at risk in both Russia and China simultaneously will require a significant increase in U.S. strategic forces beyond currently planned force levels. However, it would not require matching the deployed warhead numbers of Russian and Chinese forces combined, as multiple warhead missiles, ballistic missile submarines, and bombers constitute a large portion of the strategic nuclear force targets in both countries. Classified analysis would be required to determine the size of the required U.S. force based on projected Russian and Chinese force structures in the 2030s.

The force structure/posture requirements to enable this strategy are also critically dependent on the purposes U.S. counterforce strikes against adversary theater nuclear and conventional forces serve in the strategy. If the strategy calls only for limited strikes against theater nuclear and conventional force targets at the operational level of war in order to deter limited nuclear escalation, restore deterrence/manage escalation, and/or counter the military impact of adversary limited nuclear use, then the impact on future force requirements will be significant, but not large.

But if the strategy calls for much more extensive strikes on a wide array of conventional force targets at the operational and tactical levels of war designed to compensate for conventional inferiority, most likely in a second major power theater of conflict, the impacts will be larger.

Similarly, if the strategy calls for more extensive strikes on a wide array of theater nuclear force targets, then force requirements would increase, potentially significantly.

Finally, the requirement to target adversary nuclear command and control, including adversary leadership, might create unique hard and deeply buried target lethality requirements on future U.S. nuclear forces.

What Does This Analysis Tell Us About the Roles of Counterforce Targeting in U.S. Nuclear Strategy?

Having analyzed a range of potential future U.S. nuclear strategies that vary the roles of counterforce targeting in the context of the impending two nuclear peer threat environment, there are several key observations that can be made, and a number of key insights that can be drawn.

The first, and perhaps most important observation, is that there is disagreement over whether counterforce targeting in general, and counterforce targeting of an adversary's strategic nuclear forces and command and control in particular, is necessary to deter adversary nuclear use. Some contend that counterforce targeting of adversary nuclear forces is not only unnecessary (because those forces are not what adversaries value most), but also counterproductive (because doing so undermines first strike stability by creating "use or lose" pressures, and thus makes nuclear war more likely).³⁴⁵ Others contend that counterforce targeting of adversary nuclear forces is an imperative for effective deterrence because those forces are high on the list of things adversaries value most.³⁴⁶ In my view, this disagreement can and should be resolved as an intelligence matter of the highest importance, and U.S. strategy should be built based in part on intelligence analysis of this question.

But even with this disagreement unresolved in the unclassified debate over counterforce targeting, there are several insights that can be drawn from this analysis that lead me to conclude that counterforce targeting of adversary nuclear forces and command and control makes critical contributions to U.S. deterrence and warfighting strategy even if adversary leaderships do not count those forces as among their most treasured assets.

The first such insight is that a U.S. option to conduct a comprehensive counterforce strike on those elements of an adversary's nuclear forces and command and control it can find and target has a significant effect on an adversary's perception of how escalation of a conflict with the United States might unfold, an effect that is in our net interest to create and sustain. U.S. nuclear strategists have oft cited Thomas Schelling's argument about the "threat that leaves something to chance" to describe the adversary's perception of the likelihood that a war might escalate out of control if the adversary initiates limited nuclear escalation. This aspect of U.S. nuclear strategy has never taken the form of the United States threatening to commit suicide by escalating to conducting a large-scale nuclear attack on a nuclear-armed adversary's civil society and economic infrastructure in response to adversary limited nuclear use, nor should it. Rather, it has been implemented by making clear the United States is willing to risk uncontrolled escalation in defense of its vital interests. Fielding U.S. nuclear forces capable of reducing the damage an adversary's nuclear forces can

345 For example: Glaser, Acton, and Feter, "The U.S. Nuclear Arsenal Can Deter Both China and Russia," *Foreign Affairs* (October 5, 2023).

346 For example: *America's Strategic Posture, The Final Report of the Congressional Commission on the Strategic Posture of the United States* (October 2023).

do to the United States and its allies in extremis arguably makes the U.S. will to risk such escalation more credible. The fact that U.S. strategic nuclear counterforce options exist casts a long shadow over an adversary's escalation calculus at lower levels of violence, and instills additional caution in that calculus that would not exist without it.

The second observation that can be made from this analysis is that there is also a disagreement over whether there is a meaningful moral distinction between the damage done by a large-scale nuclear counterforce strike and that done by a large-scale nuclear strike on civil society and economic infrastructure. While the civilian damage from a large-scale counterforce strike would be unprecedented in human history,³⁴⁷ the civilian damage done by a large-scale purposeful strike on urban areas and economic infrastructure would be many, many times worse. This is not seriously debatable.

The insight that can be drawn from this observation is both a bit non-linear, and difficult to think about because of its underlying horror. But it is nonetheless critically important. Because there is a dramatically discernible difference between the consequences of incurring a large scale counterforce strike on one's targetable nuclear forces versus incurring a large scale strike on one's civil society and economic infrastructure, there are deterrence and escalation dynamics that are profoundly affected by whether a state has a large-scale counterforce option available to it if deterrence fails against an adversary that does have such an option.

A state that lacks a large-scale counterforce response option (as posited in illustrative strategies 1, 2, and 3) that suffers a large-scale preemptive counterforce strike can only respond by attacking the adversary's civil society and economic infrastructure or its conventional or theater nuclear forces and its defense industrial base, leaving remaining adversary strategic nuclear forces untouched. But why would the adversary believe that the state lacking a large-scale counterforce response option would commit suicide in this way? Executing these options in response to a preemptive counterforce strike (and exhausting one's remaining smaller nuclear force sized only to execute such responses) is almost certain to elicit an adversary counterescalation against one's own civil society and economic infrastructure.

However, if a state has nuclear forces sized and postured to ensure it can conduct both a large scale counterforce attack in response to an adversary preemptive counterforce strike and retain sufficient survivable forces to deter the adversary from counterescalating against one's civil society and economic infrastructure, then two possibilities are created. First, it is possible that the two sides might terminate the nuclear war after the large-scale counterforce exchange, without either resorting to the final option of imposing existential damage on the other and committing suicide in the process. Second, the existence of a large-scale counterforce response option backed by a survivable reserve force to deter counterescalation may well have the

347 At least in terms of the time it took to inflict such damage, and the long-term effects of it.

effect of deterring the adversary from ever initiating a preemptive counterforce attack in the first place, as doing so would result in no discernible advantage. The bottom line from this insight: having a large scale counterforce response option backed by a survivable reserve force creates an additional bulwark or firebreak against the ultimate catastrophe of an existential-level nuclear exchange. Our strategy must take into account the fact that a limited nuclear war would be unprecedentedly horrific, but an unlimited nuclear war would be far, far worse.

The third observation that can be made is that there is a disagreement over whether U.S. counterforce targeting of adversary nuclear forces can achieve “meaningful damage limitation.” Given that a large-scale U.S. counterforce attack would clearly reduce an adversary’s ability to strike the United States and its allies with nuclear weapons to some extent, this disagreement ends up being over how much damage limitation is “meaningful.” This is clearly in the eye of the beholder, and beholders will differ (though those beholders that reside in or near targets not struck are likely to find that level of damage limitation “meaningful.”) But the strategic impact of having the option of seeking to limit the damage an adversary can do is not dependent on the views of anyone engaged in this debate in the United States. Rather, it is dependent on whether adversary leaders might believe that, in extremis, the president of the United States may perceive the difference in damage the United States will incur between striking first and striking second as “meaningful” to him or her, and to the American people.

And here lies the third insight that reinforces the first: An adversary leader may in fact fear that the U.S. president might, if pushed into extremis, conclude that large-scale nuclear war is inevitable, and that the United States will incur “meaningfully” less damage if he or she launches a preemptive counterforce strike than if he or she waits to be struck first. Again, that fear is, if present, likely to instill considerable caution in the adversary’s escalation calculus, including at levels of violence far below large-scale nuclear war because a decision to start down the path of an escalating nuclear conflict is very different if one believes one’s enemy may escalate it out of control if pressed too far. It is uncertain whether having the option to conduct a damage-limiting counterforce strike will have such an effect on an adversary’s leadership. But one thing is certain: if the United States president does not have the option to launch such a strike, the adversary will fear the potential consequences of initiating nuclear escalation less because he will perceive a lower likelihood of the war escalating out of control.

One final insight regarding the impacts of removing comprehensive counterforce options from U.S. nuclear strategy in a two nuclear-peer threat environment needs to be highlighted. Advocates of precluding the targeting of adversary strategic nuclear forces and command and control argue that such targeting results in significantly larger U.S. force requirements while increasing the risk of nuclear war by creating “use or lose” pressures on adversary leadership.

They are right about the impacts on U.S. force requirements. Being able to hold Russian and Chinese nuclear forces at risk simultaneously in the mid 2030s will require a force larger than that currently planned, but it will not necessarily require a force the size of the Russian and Chinese nuclear forces combined. While fielding the nuclear forces necessary to enable our historically successful nuclear strategy against two nuclear peers will be expensive, the cost of the forces necessary to perform the highest priority mission in the Department of Defense will remain a small percentage of the total U.S. defense budget.

However, their argument regarding increasing the risk of nuclear war is plagued by one contradiction, one uncertainty, and one likely uncomfortable reality.

The contradiction is this. While contending that such counterforce targeting creates “use or lose” pressures that make nuclear war more likely, they also insist that “meaningful” damage limitation isn’t feasible. But if the latter is true, why would an adversary fear the former? If I can’t reduce the adversary’s nuclear capabilities enough to avoid catastrophic damage, why would he think he had to use those capabilities or lose them? Perhaps both these contentions can’t be true. Or perhaps the adversary values retaining nuclear forces capable of doing more than just imposing existential damage on us and our allies for other reasons.

Which leads to the uncertainty: we don’t know whether an adversary values his nuclear forces so highly that threatening to degrade them contributes to deterrence. Those who advocate foregoing nuclear counterforce targeting say our adversaries don’t value their nuclear forces that highly, but provide no factual evidence for this claim (while, again, contending that the fear of losing them might prompt them to initiate large scale nuclear war . . . why?).

But what if they are wrong. What if U.S. counterforce targeting is a significant contributor to deterrence and extended deterrence of nuclear use and large scale conventional aggression? Should we be willing to take that chance, and adopt such a strategy, when the rationale for doing so is at best uncertain?

And finally, the one likely uncomfortable reality. The United States sizes, designs, and postures its nuclear forces to enable its nuclear strategy. Were the United States to adopt a strategy to address the two nuclear-peer threat that removed large scale counterforce options against adversary strategic nuclear forces based on the contention that such options make nuclear deterrence failure more likely by creating “use or lose” pressures on our adversaries, the United States could certainly field and operate a smaller nuclear force. However, the forces required to ensure the ability to implement such strategies (like those posited in illustrative strategies 1, 2, and 3) against both peer adversaries simultaneously would almost certainly be large enough and capable enough to pose a large scale preemptive counterforce threat against either Russia or China individually. Thus, the primary purported purpose of removing this option from our strategy (avoiding creating “use or lose” pressures and undermining first strike stability) would not be achieved against either peer adversary individually. And in the process of failing to address this (purported) problem, the

United States would forego all the other potential deterrence, escalation management, and warfighting benefits such counterforce options provide. That seems like a bad strategy choice indeed.

In conclusion, the nuclear strategy the United States chooses to address the impending two nuclear-peer threat is one of the most momentous strategic choices the nation has faced. While correlation is not causation, there have been no major wars between nuclear-armed major powers since the advent of nuclear weapons, no global conflagrations like the First and Second World Wars. The very least that can be said about American nuclear strategy is that it has not failed to deter attacks on the United States and its allies by a nuclear-armed major power since the advent of nuclear weapons in 1945. A decision to abandon one of the core tenets of American nuclear strategy, comprehensive counterforce targeting for deterrence, assurance, escalation management, and damage limitation, would constitute a high-risk choice in the face of two nuclear peer adversaries who will have large-scale nuclear counterforce capabilities of their own. There is no sufficient reason to take this gamble.

Calibrating Arms Race Risks of a Counterforce Targeting Strategy

Kayse Jansen³⁴⁸

Introduction

Pursuing a dual counterforce strategy for Russia and China will ignite a three-way arms race.

Or would it?

The emergence of a second nuclear peer has spurred debates regarding the dangers of the United States attempting to hold both Russia and China's nuclear forces at risk. Typically, the conversation stops there. Almost none of the articles explain the connection between a counterforce strategy and an arms race, nor do they describe the character of a modern-day arms race or the consequences of engaging in one. Rather, an arms race is declared an inevitable outcome of a dual counterforce strategy with an underlying assumption that arms racing is bad and therefore must be avoided. Correction: nuclear arms racing is bad and therefore must be avoided. This is so strongly believed that some authors proceed to recommend less demanding (and arguably less effective) nuclear strategies simply to avoid it.

This paper seeks to understand the nature of arms racing risks and how consequential they might be. To do so, it begins with a catalog of the core judgments underpinning concerns about counterforce and arms racing; four stand out. It then evaluates each in turn, concluding that all are flawed. The paper closes with a set of judgments that more accurately reflect the strategic problems now in front of us.

Core Judgments

Consider the following arguments, excerpted from a series of essays published in 2023:

“[Counterforce strategy against two nuclear peers] would almost certainly lead to a three-way arms race..., increasing the risk of a crisis or conflict that might turn nuclear.”³⁴⁹

“If the United States responds to the Chinese buildup by increasing its own deployed warheads and launchers, Russia would most likely respond by increasing its deployed warheads and launchers... [China]

348 The views presented in this article are those of the author and do not necessarily represent the views of USSTRATCOM, the U.S. Air Force, Department of Defense, or the U.S. government.

349 Charles L. Glaser, James M. Acton, and Steve Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia,” *Foreign Affairs* (October 5, 2023).

might well respond to the U.S. and Russian increases by increasing its own arsenal even further.”³⁵⁰

“The easiest way to [increase the U.S. arsenal] would be to upload one to two thousand additional warheads... Unfortunately, a major increase in U.S. forces would likely mark just another step in an intensifying arms competition among the three leading nuclear powers, since China and Russia would then feel pressure to respond.”³⁵¹

“...if U.S. leaders meet the challenge of emerging tripolarity by (adopting a countervalue strategy), then the costs and risks of a new nuclear arms competition might be avoided.”³⁵²

The following judgments are made in these articles. First and foremost is that a counterforce targeting strategy (i.e., the use of nuclear weapons to reduce an adversary’s ability to launch its nuclear forces by targeting platforms and launchers, weapons storage sites, command and control, among other examples) leads to arms racing. Second is the inverse, that a countervalue strategy (i.e., the use of nuclear weapons to cause societal destruction by targeting civilian population centers and infrastructure) leads to the absence of arms racing. Third, arms racing is a simplistic action-reaction cycle. Finally, arms racing leads to war.

Does Counterforce Drive Arms Racing?

The judgment that a U.S. counterforce targeting strategy against two peers will cause an uncontrollable arms race has the following underlying logic: as an adversary’s nuclear force grows, the number of targets grow, driving a need to expand one’s arsenal to maintain an effective counterforce strategy. However, a counterforce targeting strategy only drives an increase in warheads if adversary platforms or launchers grow in a specific and significant manner. No increase is necessary if the adversary uploads additional warheads onto pre-existing platforms and launchers. Thus, an adversary fielding additional warheads via a multiple independent re-entry vehicle (MIRV) configuration does not generate the same requirement for additional forces as would the fielding of those weapons on individual delivery systems. At the same time, an adversary deploying additional platforms and launchers does not

350 Hans Kristensen et al., “Strategic Posture Commission Report Calls for Broad Nuclear Buildup,” Federation of American Scientists (October 12, 2023). <https://fas.org/publication/strategic-posture-commission-report-calls-for-broad-nuclear-buildup/>. Accessed July 11, 2024.

351 Keir Lieber and Daryl Press, “US Strategy and Force Posture for an Era of Nuclear Tripolarity,” Atlantic Council, *Forward Defense* (May 1, 2023). <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/us-strategy-and-force-posture-for-an-era-of-nuclear-tripolarity/>. Accessed July 19, 2024.

352 Ibid.

necessarily require a symmetric expansion of platforms and launchers for the other party. If the additional targets can be covered by MIRVing available forces, then no expansion in platforms or launchers is necessary.

Bringing this theoretical conversation into reality, the issue at hand is China's nuclear breakout, which does include a significant increase in platforms and launchers. The arms race concern, therefore, is that U.S. pursuit of a dual counterforce strategy would require a significant increase in its own force. However, this does not account for the starting point from which any necessary increase would be based. The capacity of the United States' current force and its intentional design to hedge against uncertainty, to include geopolitical risks where an adversary expands its nuclear forces, must be considered first.³⁵³ In short, while enhancements to U.S. nuclear forces may be necessary,³⁵⁴ they would not be a one-for-one match to China's expansion because the United States made preparations for such developments. Further, the United States does not seek quantitative parity with the sum of Russian and Chinese nuclear forces.³⁵⁵ Herein lies the true source of an uncontrolled arms race—parity.

Numerical or qualitative parity is the only “strategy” that directly leads to an arms race. It, not counterforce targeting, drives the action-reaction cycle described in recent articles.³⁵⁶ Parity is about equality; counterforce is about necessity. This becomes evident when studying the Cold War arms race in terms of strategy evolution. Figure 1 displays U.S. and Soviet Union arsenals during the Cold War and delineates when the United States shifted its targeting strategy from massive response to limited response and counterforce.

353 See the 2018 and 2022 *Nuclear Posture Reviews* for discussions on sizing the nuclear force for hedging and risk mitigation Jim Mattis, Nuclear Posture Review, 2018; U.S. Department of Defense, *2022 National Defense Strategy of The United States of America* (2022). <https://media.defense.gov/2022/Oct/27/2003103845/-1/-1/1/2022-NATIONAL-DEFENSE-STRATEGY-NPR-MDR.PDF>. Accessed July 11, 2024.

354 See Gen. Cotton, Secretary Austin, and Chairman Brown's testimonies on the sufficiency of the nuclear modernization program of record. “Military Commanders Testify on Nuclear and Space Defense,” C-SPAN (February 29, 2024), <https://www.c-span.org/video/?533928-1/military-commanders-testify-nuclear-space-defense> (accessed July 11, 2024); “To Receive Testimony on the Department of Defense Budget Request for Fiscal Years 2025 and the Future Years Defense Program” (April 9, 2024), <https://www.armed-services.senate.gov/hearings/to-receive-testimony-on-the-department-of-defense-budget-request-for-fiscal-year-2025-and-the-future-years-defense-program> (accessed July 11, 2024 and February 29, 2024).

355 Jake Sullivan, “Remarks by National Security Advisor Jake Sullivan for the Arms Control Association (ACA) Annual Forum,” the White House (June 2, 2023).

356 Rusten and Melamed capture this by stating “...in a world with two near-peer nuclear competitors, it will not be possible for the United States to achieve parity with both Russia and China. Any effort to increase U.S. nuclear forces to match their combined total weapons likely will be countered by Russia's determination to maintain parity with the United States and could stimulate China to further increase its nuclear forces. This is a recipe for an unending arms race...” (emphasis added). Lynn Rusten and Mark Melamed, “The Three-Competitor Future: U.S. Arms Control With Russia and China,” *Arms Control Today*, Arms Control Association (March 2023). <https://www.armscontrol.org/act/2023-03/features/three-competitor-future-us-arms-control-russia-china>. Accessed July 11, 2024.

As displayed in Figure 1, the U.S. arsenal peaked in 1967 at around 31,000 warheads³⁵⁷ under a strategy of massive response. In 1974, fearing its current strategy was not sufficient to credibly deter and counter an emerging nuclear peer, the United States shifted to a limited response and counterforce strategy.³⁵⁸ The Soviet Union's arsenal peaked around 1986, some 10 years later, at more than 40,000 warheads. According to the counterforce-derived arms race logic, the U.S. arsenal should have kicked back into gear to at least match the Soviet arsenal in the time spanning 1973 to 1986. Instead, the United States reduced its stockpile.

Estimated Global Nuclear Warhead Stockpiles 1945 - 2023

Hans M. Kristensen, Matt Korda, Robert S. Norris, and Eliana Johns, Federation of American Scientists

Last Updated 28 March 2023

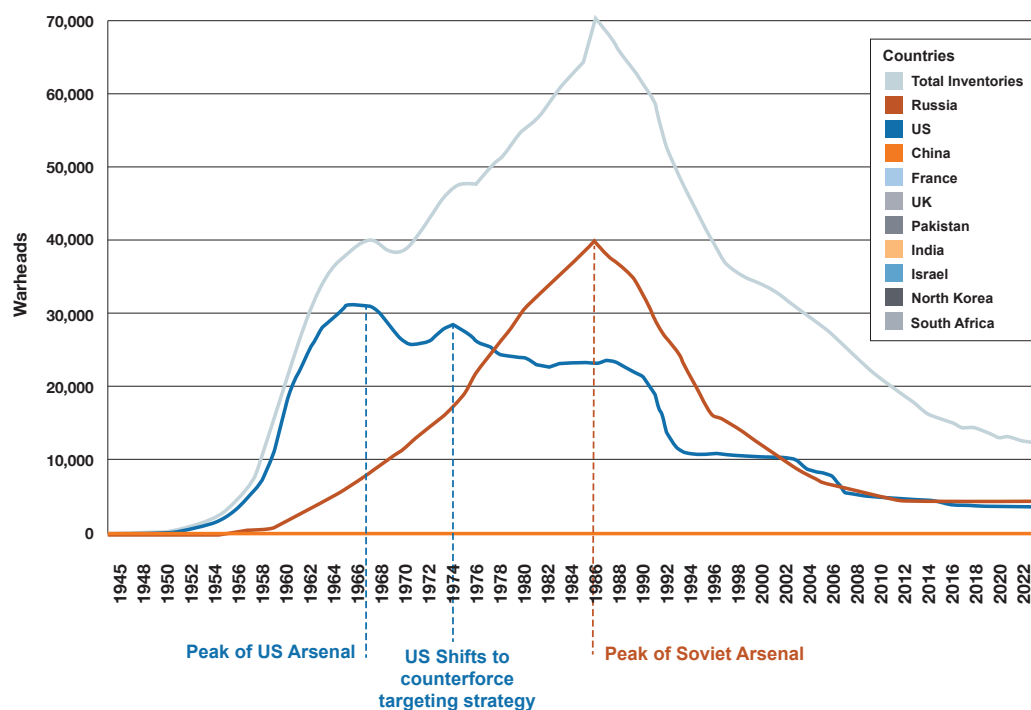


Figure 1. Targeting Strategy vs. Arsenal Size

357 Hans Kristensen et al., "Status of World Nuclear Forces," Federation of American Scientists (March 29, 2024). <https://fas.org/initiative/status-world-nuclear-forces/>. Accessed July 11, 2024.

358 While U.S. targeting strategy prior to 1974 included attacking the adversary's military force, NSSM 169 shifted the focus to shaping the post-war environment, where attacking the adversary's ability to conduct nuclear strikes or maintain a nuclear deterrent drove a new counterforce targeting strategy. Regardless of the shift in purpose, it holds that the United States did not seek to match or outnumber the Soviet Union once it surpassed the U.S. stockpile around 1978. "NSSM 169 - U.S. Nuclear Policy Summary Report" (June 8, 1973), National Security Archive, <https://nsarchive2.gwu.edu/NSAEBB/NSAEBB173/SIOP-21.pdf> (accessed July 11, 2024); Office of Secretary of Defense, "Policy Guidance for the Employment of Nuclear Weapons," National Security Archive (April 3, 1974), <https://nsarchive.gwu.edu/document/20307-national-security-archive-doc-22-office> (accessed July 11, 2024).

Does Countervalue Avoid Arms Racing?

The second judgment is that switching to a countervalue strategy avoids an arms race. The argument contends that a countervalue targeting strategy is less demanding and less dependent on adversary forces than a counterforce strategy. While accurate, it tells an incomplete story. The number of nuclear weapons required to inflict intolerable costs may not be as low as one might imagine. Look no further than Herman Kahn for an opposing viewpoint that an advanced, sizeable force is still required to ensure the ability to achieve “unacceptable” levels of damage, and even then, mutually assured destruction is not guaranteed (e.g., missile defense, civil defense³⁵⁹).³⁶⁰ While a countervalue strategy may seemingly avoid the need to grow the U.S. stockpile, it would likely require developing new, larger yield warheads just as the nation is set to retire its only megaton-class weapon.³⁶¹ Unless this can be accomplished by modifying remaining weapons, the stockpile may still need to grow, at least initially. Regardless of the adjustments necessary to meet the demands of a city-busting strategy, the United States must still be able to survive or absorb an enemy’s attack and subsequently employ possibly hundreds (not tens) of warheads.³⁶²

Further, shifting targeting strategy does not address the need to maintain that undefined, unmeasurable thing called stability. For lack of a better approach, stability is often equated with rough numeric parity. President Obama acknowledged the need for rough equivalency with Russia as his administration pursued reductions below New START levels.³⁶³ Once again, the United States does not seek numeric parity with the sum of Russian and Chinese arsenals. However, there remains this stability concern driving an ambiguous need to “do something” in response to dramatic shifts in the security environment. There is also the perception of some that adversaries are gaining strategic advantages while the United States is losing them, a difficult position for a nation extending security guarantees to allies neighboring Russia, China, and North Korea.

359 On an annual basis, Russia rehearses evacuating civilians during a nuclear war. Yuri Zoria, “British intel: Russia marks Civil Defence Day with unchanged annual nuclear war drills on civilian evacuation” (May 10, 2023). <https://euromaidanpress.com/2023/10/05/british-intel-russia-marks-civil-defence-day-with-unchanged-annual-nuclear-war-drills-on-civilian-evacuation/>. Accessed July 11, 2024.

360 See Kahn’s concept of “finite deterrence.” Herman Kahn, *On Thermonuclear War* (Milton Park, England: Routledge, 2007), pp. 13-18.

361 Hans M. Kristensen and Matt Korda, “Nuclear Notebook: United States nuclear weapons” Bulletin of the Atomic Scientists (January 16, 2023). <https://thebulletin.org/premium/2023-01/nuclear-notebook-united-states-nuclear-weapons-2023/>.

362 Leiber and Press justify a countervalue strategy because “The prohibition on deterrence through ‘countervalue’ targeting—the common term for targeting civilian populations and infrastructure—is a hidden driver of U.S. nuclear force requirements. It necessitates a large U.S. arsenal that can absorb an enemy strike and subsequently destroy hundreds of hardened enemy military sites.” However, this requirement remains even when shifting to a pure countervalue strategy. Leiber and Press, “U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity.” A countervalue strategy, however, still requires a large U.S. arsenal that can absorb an enemy strike and subsequently destroy hundreds of enemy sites.

363 “...large disparities in nuclear capabilities could raise concerns on both sides and among U.S. allies and partners, and may not be conducive to maintaining a stable, long-term strategic relationship...” Department of Defense, *Nuclear Posture Review Report* (April 2010).

Finally, the countervalue assumption gives no consideration to the targeting strategies of U.S. adversaries. The proposed solution to avoiding an arms race is to shift U.S. strategy, but what if Russia or China maintain or pursue their own counterforce targeting strategies? Is an asymmetric targeting relationship between the United States and its peers cause for concern? It would be if adversaries advance their counterforce capabilities in quantity and/or quality to a point that exacerbates the other two issues highlighted in this section, namely U.S. assured response and stability via rough parity. Perhaps the most critical implications are for U.S. allies. Should Russia and/or China initiate aggression leading to direct attacks against U.S. allies, it would seem prudent that Russia and China pair such aggression with a counterforce attack against the United States. This would both undermine U.S. ability to respond on their allies' behalf as well as coerce the United States from further intervention in the conflict. While such an attack would be quite large in scale, consider what has been left intact—America's largest cities and critical infrastructure largely untouched. When the United States' only response is a survived countervalue attack, which is sure to be met with a likewise response, one can see how Russia and China could compel conflict termination on their terms.

Is There a Simplistic Action-Reaction Cycle?

A third core judgment in these articles deals with the nature of arms racing itself. As articulated, nuclear arms racing consists of automatic increases in one's nuclear capability and capacity should another increase its nuclear capability and capacity. It is action-reaction based and an oversimplification of a nation's decision to adjust its nuclear deterrent. It does not consider the unique roles nuclear weapons play for each country's security (and in the case of the United States, the security of its allies) or its combined military strength when incorporating non-nuclear capabilities. As happens too frequently, the articles isolate nuclear weapons in a strategic vacuum. Not only is this an inadequate view of a nation's threat landscape, but of military strategy writ large.

Even Richardson's classical arms race model considers more variables than simply responding to the military spending and buildup of a rival. It accounts for "fatigue," and "grievance" or "ambition," which represent the challenges of maintaining high levels of military spending as well as a country's perceived need or desire for capabilities independent of the rival. The number of other variables and considerations (economic realities, starting arsenal sizes, for example) have only grown as analysts continue studying arms race models. The point: arms racing is not the automatic result of a nation increasing its nuclear capacity. And as discussed above, a nation increasing its nuclear capacity is not the automatic result of a counterforce targeting strategy.

Does Arms Racing Lead to War?

The fourth judgment also merits scrutiny: that arms races lead to war. One authoritative analysis of available historical data from 1816 to 1982 suggests that they do. The author concludes that "the existence of an arms race between the two powers

prior to the dispute was very strongly associated with its subsequent escalation to full-scale hostilities.”³⁶⁴ But a separate study focused on serious disputes in the nuclear era concluded that none ended in war.³⁶⁵ Perhaps this reflects Bernard Brodie’s famous quote, “Thus far the chief purpose of our military establishment has been to win wars. From now on its chief purpose must be to avert them.”³⁶⁶

A corollary, therefore, is that arms racing in the pre-nuclear era was about correlation of forces to prevail in armed conflict. Therefore, the buildup of such arms logically links to conflict escalation. Arms racing in the nuclear era for nuclear-armed nations, however, is not necessarily about preparation for conflict but the avoidance of conflict. More accurately, a U.S. decision to compete in nuclear arms today is for the purpose of strategic necessity (not strict parity as discussed earlier) to enhance deterrence of aggression against itself and its allies. This tracks with the second body of work that expands the range of relations between arms racing and conflict. Here the authors go beyond “arms races leading to war” and “the avoidance of arms races maintaining peace” to the conditions where “arms races maintain peace” and “the avoidance of arms races lead to war.”³⁶⁷ Intent lies at the center of their analysis. If an aggressor increases its nuclear capacity under a pre-existing intent for conflict or to more credibly deter outside intervention in that conflict, then a lack of response by the other side signals a lack of will (and possibly capability), thus leading to the conflict envisioned. If, however, the other side responds with a counter expansion, thereby signaling will and ability to engage, then conflict may be avoided. Whether conflict occurs is not simply the result of an increase in arms, but the intent that drove the increase and the subsequent testing of a worthy competitor.

There is another issue at play. There is a built-in assumption that the military lever of power instigates war. Enter the chicken and the egg debate. Does geopolitical turmoil, conflicting national objectives, and economic competition lead to interstate crises and conflicts for which military power is necessary to prevail (or in the nuclear age, avoid)? Or does the advancement and expansion of military capabilities cause crises and conflicts from which geopolitical turmoil, conflicting national objectives, and economic competition arise? Consider Schelling’s “The power to hurt is bargaining power. To exploit it is diplomacy.”³⁶⁸ More popular is Clausewitz’s “war is nothing but the continuation of policy with other means.” In other words, it is not the military instrument that causes wars, but the diplomatic and, by extension, economic. Arms races or competitions, in and of themselves, do not trigger interstate crises or conflicts.

364 Michael D. Wallace, “Armaments and Escalation: Two Competing Hypotheses,” *International Studies Quarterly* 26, no. 1 (March 1982), pp. 37–56.

365 Michael D. Intriligator and Dagobert L. Brito, “Can Arms Races Lead to the Outbreak of War?” *Journal of Conflict Resolution* 28, no. 1 (March 1984), pp. 63–84.

366 Bernard Brodie, “Implications for Military Policy,” *The Absolute Weapon: Atomic Power and the World Order*, Institute of International Studies (New York, NY: Harcourt Brace, 1946).

367 Intriligator and Brito, “Can Arms Races Lead to the Outbreak of War?”

368 Thomas C. Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966), p. 2.

Calibrated Judgments

The United States answering the expansion of China's forces with deployments in support of a counterforce strategy, while addressing undefinable stability concerns, would be more accurately characterized as nuclear arms competition, not arms racing. Yet that is still an incomplete description. A major misstep in the articles referenced at the beginning of the paper is their singular focus on nuclear weapons. This dismisses the reality that arms competitions are alive and well with hypersonic conventional weapons, cyber, space, intelligence, information (or more appropriately, disinformation), and advanced technology, to name a few. At the root of compartmentalizing the security environment is the desire to separate nuclear from non-nuclear. This is no longer possible. Technological advancements in 2017 led Lieber and Press to conclude that "leaps in accuracy and remote sensing should reopen debates...about the wisdom of pursuing effective counterforce systems. Fielding those capabilities...may prove invaluable: enhancing deterrence during conventional wars and, if deterrence fails, allowing the United States to defend itself and its allies... Today, technological trends appear to validate the advocates of counterforce...In this new era of counterforce, technological arms racing seems inevitable, so exercising restraint may limit options without yielding much benefit."³⁶⁹ Their conclusions remain valid, even in a two-peer environment.

Beyond the technological realities of the 21st century lies the revanchist aspirations of Russia and China. If Russia's elevated nuclear rhetoric and China's nuclear breakout are symptoms of ill intent to reshape international norms and regional balances of power through armed conflict, then a lack of U.S. response risks sending the wrong signal. Restraint in this situation does not promote stability but demonstrates an unwillingness to defend the international order and U.S. alliance architectures. At the same time, an exaggerated U.S. response that seeks only to react may unnecessarily exacerbate tensions with Russia and China. Rather, a measured response, based in necessity to enable U.S. strategy to defend itself and its allies, is necessary, especially as the potential for simultaneous or near-sequential conflicts grows.

U.S. allies are a common theme when discounting the flawed judgments regarding a dual counterforce strategy.³⁷⁰ This comes as no surprise as the articles referenced at the beginning of the paper either dismiss ally considerations³⁷¹ or fail to account for them. The reality, however, is that U.S. extended deterrence commitments constrain

369 Keir A. Lieber and Daryl G. Press, "The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence," *International Security* 41, no. 4 (Spring 2017).

370 A useful corrective to these ill-formed judgments is Costlow, Peters, and Balzer's War on the Rocks article that summarizes the challenges associated with the term "arms race." From the connotations of the term itself to the lack of a common definition, these authors provide important context that encourage a measured approach when assessing the existence and risks of an arms race. Matthew Costlow, Robert Peters, and Kyle Balzer, "A Misleading Metaphor: The Nuclear 'Arms Race,'" War on the Rocks (November 20, 2023). <https://warontherocks.com/2023/11/a-misleading-metaphor-the-nuclear-arms-race/>. Accessed July 11, 2024.

371 "...the assurance mission is important, but it does not create force structure requirements beyond the core deterrence mission." (Lieber and Press)

how much the nation can evolve its nuclear policy and strategy.³⁷² What may be acceptable for deterring and responding to threats on the U.S. homeland, is often not acceptable for an ally. This is why the 2022 Nuclear Posture Review ultimately rejected Sole Purpose and No First Use.³⁷³ While a countervalue strategy may be acceptable for U.S. security, it fails the credibility check for responding on behalf of an ally. While the existing U.S. arsenal may remain sufficient to deter attacks on the United States, it may not be seen as credible for allies tallying the number of security commitments the United States maintains across Europe and Asia. Determining the appropriate strategy and force size for a two-peer environment does not rest on U.S. security alone, but the unique requirements of our allies.

Conclusion

A dual counterforce targeting strategy does not drive a three-way arms race. At the same time, a dual countervalue strategy would not simply allow the United States to avoid any sort of nuclear arms competition. An exaggerated sensitivity to arms competition is dangerous for three reasons. First, it distracts from doing what is necessary for deterrence and assurance. The knee-jerk reaction to call the development of any new nuclear capability “engaging in or expanding an arms race” not only undermines the justification for a needed capability but is just wrong. It only serves the purpose of those seeking to eliminate nuclear weapons at all costs. Second, it conflates the symptom for the disease. Arms competition is the symptom of a geopolitical infection. Conflict is another symptom, stemming not from the arms competition but from diseased intent. Finally, it jeopardizes long-standing U.S. strategy and policy for deterring and confronting a peer adversary. Limited response options and a counterforce targeting strategy were born out of a need to face the realities of a bipolar security environment. Those basic principles hold true even as the United States faces two peer competitors. Reducing to a less demanding strategy prioritizes disarmament goals over national security, both for the United States and its allies.

372 The constraints exist as long as the United States seeks to maintain nonproliferation goals via credibly extending deterrence.

373 U.S. Department of Defense, *2022 National Defense Strategy of The United States of America*.

Counterforce: Possible Risks Going Forward

Paul Bernstein

Context

To varying degrees, the essays in this volume make the case for the continued benefits of a counterforce doctrine as the basis for strategic deterrence and determining the sufficiency of U.S. nuclear forces. These benefits include the deterrence “shadow” embodied in a large, diverse arsenal; the ability to hold at risk very high value assets and thereby impose costs on an adversary to enhance their survivability; a high degree of flexibility in considering nuclear signaling and employment courses of action in an intra-war deterrence phase; a strong basis for crisis maneuvering and bargaining for war termination or related goals more associated with compellence; enhanced prospects to limit damage to the United States and its allies and reduce the costs of nuclear war if deterrence fails; stronger allied reassurance; and meaningful leverage for arms control negotiations.

The emergence of a second “nuclear peer” is not seen as negating these benefits; the strongest and most defensible nuclear deterrent against capable and determined competitors remains one that credibly holds at risk their highest value strategic assets while creating options that increase the prospects for avoiding uncontrolled escalation and the worst possible outcomes. While the United States faces potentially significant costs to field the forces required to achieve this deterrent capability; failing to do so—either by default (indecision or inertia) or design (deliberate shift to an alternative approach)—will run unacceptable risks. The possibility that central, regional, and extended deterrence could be weakened; the U.S. geopolitical position further eroded; potential adversaries emboldened to challenge the United States through acts of regional aggression; and arms control leverage dissipated should give Washington pause in considering a retreat from counterforce that could send the wrong message at the wrong time to friend and foe alike.

If these are seen as the principal dangers of not sustaining a counterforce approach to deterrence and nuclear force sufficiency, what can be said about the risks and costs of continued adherence to counterforce doctrine? A segment of expert opinion has focused on this question, directly or indirectly, for many years.

The following discussion is general in nature. That is, it is not premised on any particular U.S. counterforce posture (or range of plausible postures) but rather on the basic assumption that the United States will continue to maintain a fielded force that is consistent with longstanding counterforce objectives. If deemed important to inform policy decisions in the period ahead, subsequent assessments can examine relative risks and costs across a number of detailed alternative counterforce postures.

Realistically, given China's nuclear expansion in particular, any of these postures will be larger than today's force at least with respect to operationally deployed warheads, but may be different in other ways, as well. U.S. officials have publicly acknowledged that the nation may need to consider fielding a larger nuclear force to ensure continued ability to support presidential guidance for deterring nuclear conflict and employing nuclear weapons if deterrence fails.³⁷⁴ Studies led by the Defense Department are exploring how this could be done. A number of independent expert assessments have articulated a strategic rationale for this approach and offered specific recommendations for expanding deployed nuclear forces and creating robust hedges in case still further force growth is needed in the future.³⁷⁵

Other experts have refreshed well-known arguments against counterforce as a way to challenge the idea of growing the nuclear force and some have articulated alternative approaches to targeting U.S. nuclear weapons and defining sufficiency that would obviate the need to expand these forces.³⁷⁶ It is clear that the discussion about counterforce is shaped by highly contested ideas about how to ensure effective and stable nuclear deterrence.

A second caveat is to note that this brief discussion of risks and costs is not intended to advocate for or against continued adherence to a counterforce doctrine, or to comprehensively evaluate the merits of arguments that have been or could be made about the risks of such an approach. Put differently, it is not a risk assessment or an examination of the net balance between counterforce risk and benefit, but rather an overview of arguments that have been or are being made about the potential dangers of continued adherence to a counterforce approach. While these arguments overall are not fundamentally new, they have taken on new urgency for those making them in light of the more focused debate now taking place about how the United States should respond

374 "Adapting the U.S. Approach to Arms Control and Nonproliferation to a New Era," remarks by Pranay Vaddi, special assistant to the president and senior director for Arms Control, Disarmament, and Nonproliferation, National Security Council at the Annual Meeting of the Arms Control Association (June 7, 2024). <https://www.armscontrol.org/2024AnnualMeeting/Pranay-Vaddi-remarks>. Accessed June 28, 2024.

375 For example, *America's Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (October 2023), <https://www.ida.org/research-and-publications/publications/all/a/am/americas-strategic-posture> (accessed June 28, 2024), and *China's Emergence As A Second Nuclear Peer: Implications for U.S. Nuclear Deterrence Strategy* (Livermore, CA: Center for Global Security Research, 2023), https://cgsr.llnl.gov/content/assets/docs/CGSR_Two_Peer_230314.pdf (accessed June 28, 2024).

376 A principal contemporary example is Charles L. Glaser, James M. Acton, and Steve Fetter, "The U.S. Nuclear Arsenal Can Deter Both China and Russia," *Foreign Affairs* (October 5, 2023). <https://www.foreignaffairs.com/united-states/us-nuclear-arsenal-can-deter-both-china-and-russia>. Accessed June 28, 2024. Earlier assessments include Hans M. Kristensen, Robert S. Norris, and Ivan Oelrich, "From Counterforce to Minimal Deterrence: A New Nuclear Policy on the Path Toward Eliminating Nuclear Weapons," Federation of American Scientists and The Natural Resource Defense Council (April 2009), <https://fas.org/publication/counterforce-minimal-deterrence-new-nuclear-policy-path-toward-eliminating-nuclear-weapons/> (accessed June 28, 2024), Benjamin Friedman, Christopher Preble, and Matt Fay, "The End of Overkill? Reassessing U.S. Nuclear Weapons Policy," CATO Institute (2013), <https://www.cato.org/white-paper/end-overkill-reassessing-us-nuclear-weapons-policy> (accessed June 28, 2024), and Bruce G. Blair, *The End of Nuclear Warfighting: Moving to a Deterrence-Only Posture*, Program on Science and Global Security, Princeton University and Global Zero (September 2018), <https://www.globalzero.org/wp-content/uploads/2018/09/ANPR-Final.pdf> (accessed June 28, 2024).

to a clearer understanding of China's nuclear expansion, an increasingly manifest two nuclear-peer challenge, and dimming prospects for arms control.

Possible Risks

Critiques of counterforce typically focus on a number of interrelated risks: feasibility, crisis stability, arms race dynamics, and strategic relevance. Cost considerations are embedded in all but one of these. Additionally, there is a risk of a more political nature that is also closely tied to the cost question—namely, the risk to the bipartisan consensus on nuclear modernization in the U.S. Congress.

Feasibility Risk. Concern about feasibility is a common theme among skeptics of counterforce: achieving a credible counterforce capability against two nuclear peers likely will prove too difficult given the growth in their nuclear forces, the mobility of some of these forces, programmatic costs, constraints on the capacities of the U.S. nuclear enterprise, and possible domestic political constraints in the United States (discussed later in this chapter). Most importantly, nuclear peer competitors are likely to respond to counterforce-driven growth in U.S. nuclear capabilities by further expanding their own forces. This leads to a compounding risk: that the significant investment required to expand U.S. forces in a strategically meaningful way will, in the end, be a largely wasted effort that imposes large opportunity costs vis a vis other defense priorities while delivering at best modest security benefits and generating still other strategic and political dangers.³⁷⁷

These concerns are not limited to the ability of the United States to field needed nuclear systems. Feasibility risk is seen as encompassing intelligence, surveillance, and reconnaissance (ISR) requirements as well. As Russian and particularly Chinese forces expand further, there will be corresponding new demands on U.S. ISR capabilities to enable holding at risk with high confidence a growing target set, elements of which may be difficult to “find and fix” or whose operational status may be unclear (e.g., Chinese ICBM silos). The future dynamics of detection are difficult to project, and scholars differ on the degree to which new sensing technologies will make nuclear arsenals more vulnerable to attack.³⁷⁸ A key question, then, is whether U.S. ISR capabilities will remain capable of supporting a counterforce approach. Even assuming state-of-the-art ISR, improved adaptive planning and dynamic targeting capabilities will be necessary to fully exploit advances in detection. Another key

377 See Charles L. Glaser and Steve Fetter, “Should the United States Reject MAD?” *International Security* 41, no. 1 (Summer 2016), pp. 49–98, or, for a condensed version, Charles L. Glaser, “Foregoing Damage Limitation Against China’s Nuclear Weapons,” *International Security Policy Brief*, Belfer Center for Science and International Affairs (August 2016), <https://www.belfercenter.org/sites/default/files/legacy/files/forgo-damage-limitation-final.pdf> (accessed June 28, 2024). More recently, see Glaser, Acton, and Fetter, *Foreign Affairs*, op. cit. See also Keir A. Lieber and Daryl G. Press, “U.S. Strategy and Force Posture for an Era of Nuclear Polarity,” *Atlantic Council Issue Brief* (April 2023). <https://www.atlanticcouncil.org/in-depth-research-reports/issue-brief/us-strategy-and-force-posture-for-an-era-of-nuclear-tripolarity/>. Accessed June 28, 2024.

378 For both sides of this argument, see Keir A. Lieber and Daryl G. Press, “The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence,” *International Security* 41, no. 4 (Spring 2017), pp. 9–49 and Glaser, Acton, and Fetter, op. cit.

counterforce enabler is the ability to hold at risk hard and deeply buried targets used to protect high value strategic assets.

To the degree emerging technologies in fact become powerful enablers of U.S. counterforce doctrine, feasibility is less of a concern. But there is much uncertainty. A prudent approach to weighing feasibility risk would find it reasonable to assume that China will get better at hiding and protecting strategic assets and developing counters to U.S. capabilities that enable counterforce targeting.

Acknowledging these challenges, it must also be noted that feasibility risk is most acute when counterforce is followed to its logical endpoint—that the arsenal fielded by the United States must be a direct function of the size of competitors’ arsenals. In practical terms this “pure” form of counterforce implies the ability to hold at risk virtually all relevant targets (not only nuclear forces) or achieve a more or less complete damage limitation capability. Presumably this would leave open the option to attempt pre-emptive attacks if circumstances warranted or pursue a form of escalation dominance. However, as suggested above, even if such a capability could be achieved vis à vis China in the near- to mid-term, continued growth in Chinese forces would lead to its steady erosion, the more so if China grew increasingly adept at hiding or protecting its nuclear assets or otherwise limiting U.S. detection efforts. Significant growth in Russian nuclear forces if New Start expires without a follow-on agreement in place would compound this challenge.

But not all proponents of counterforce see the need to follow it to its logical endpoint. Many openly acknowledge the constraints on U.S. ability to achieve comprehensive counterforce but still see merit in a limited counterforce/damage limitation capability that could buttress deterrence in extremis and create advantage for the United States.³⁷⁹ Indeed, as has been elaborated elsewhere, U.S. policy has long recognized these constraints and characterized a role for counterforce to the extent “practicable” or “feasible.”³⁸⁰

In a limited form of counterforce, feasibility risk may be significantly mitigated, depending on the specific objectives defined for the strategy. Feasibility risk could also be mitigated if U.S. non-nuclear capabilities can be leveraged to hold at risk some counterforce targets in ways that are just as or more cost-effective than nuclear weapons. This seems most relevant to mobile missile facilities that can be detected through enhanced ISR, strategic submarines whose detection in support of a counterforce approach might depend on added investment in anti-submarine warfare, and strategic sites and functions that are assessed to be vulnerable to offensive cyber tools.³⁸¹ Where feasibility risk can be mitigated, other considerations, especially

379 John Warden and Brian Radzinsky, “Counterforce and Deterrence of Russia and China,” unpublished discussion paper prepared for the Center for Global Security Research, Lawrence Livermore National Laboratory, undated. See also Lieber and Press, *op. cit.*, Atlantic Council.

380 CGSR, “China’s Emergence,” *op. cit.*, pp. 30-32.

381 Warden and Radzinsky, *op. cit.*

those related to strategic stability, become more salient in considering overall risks associated with counterforce.

Stability Risk. As with feasibility, concerns about stability feature prominently in contemporary warnings about the dangers of continued pursuit of counterforce. Counterforce is seen as undermining stability in both key dimensions—crisis stability and arms race stability. The counterforce risk to crisis stability stems from the possibility that a competitor will perceive it not as a strategy of restraint intended to underwrite mutual deterrence, but as an effort to enable pre-emption (“disarming first strike”) and thereby confer decisive advantage on the United States in a nuclear crisis or conflict. The competitor may reach this conclusion even if the United States in fact lacks a comprehensive counterforce or damage limitation capability, especially if it harbors doubts about its own ability to retaliate. The result could be potentially powerful incentives in an acute crisis for the adversary to escalate early to the nuclear level, in part out of “use or lose” fears.³⁸²

A number of factors could heighten or broaden this risk, including adversary adoption of practices such as launch on warning, pre-delegation, and crisis dispersal of nuclear weapons³⁸³—as well as steps the United States could take to supplement an expansion of its nuclear forces with significant enhancements to regional and national missile defenses and conventional counterforce capabilities. On the other hand, crisis stability risk grounded in Chinese fears of a disarming first strike should ease as China’s second-strike capability becomes increasingly secure. Potentially, stability risk could be mitigated in other ways as well, including through dialogue, tailored strategic messaging, and realistically achievable risk reduction measures.

Still, nuclear crisis dynamics are likely to be highly fraught and difficult to game out with high confidence; the escalation pressures that might be generated by adversary perceptions of U.S. counterforce intent and capability could lead to disastrous outcomes, even if this may be considered a low risk by American strategists. However low, this risk needs to be weighed against the more sanguine assumption that effective counterforce will in fact induce caution in the adversary and thereby reduce escalation risk and reinforce crisis stability.

Such an assessment might conclude that, as with feasibility risk, crisis stability risk would be more manageable if U.S. damage limitation capabilities were less than comprehensive and purposefully oriented to achieve limited objectives in some sort of middle ground vis à vis adversary perceptions. This “Goldilocks” counterforce capability would be sufficiently robust to induce caution in the adversary about escalating to nuclear employment but not so robust as to create acute “use or lose” pressures.³⁸⁴ The challenge would then be to operationalize these parameters. In

382 Glazer, Acton and Fetter, op. cit. For a skeptical view, see CGSR op. cit., pp. 31-33 and Matthew Kroenig, *The Logic of American Nuclear Strategy* (New York, NY: Oxford University Press, 2020), pp. 127-142.

383 “Broadened risk” here is meant to distinguish between factors that could further incentivize intentional escalation and those operational postures and practices that could make accidental, unauthorized, or inadvertent nuclear employment more likely.

384 Warden and Radzinsky, op. cit.

the words of one assessment: “While theoretically possible to find such a middle ground—a credible capability to limit damage understood by both sides to not be comprehensive—it is difficult to precisely define from a requirements perspective because it depends on adversary perception that is difficult to ascertain and likely to change over time.”³⁸⁵

Not all analysts agree this type of approach would meaningfully mitigate the crisis stability risks of counterforce for the reason that even small counterforce strikes could reinforce adversary fears related to damage limitation and thereby fuel escalation pressures. By this logic, the crisis stability risks associated with counterforce are largely insensitive to the scale or scope of U.S. capabilities or actions. This form of persistent risk, it is argued, can only be mitigated by moving decisively away from a counterforce approach.³⁸⁶

The risk to arms race stability is viewed by many as inherent in the logic of counterforce and driven by what some analysts refer to as an action-reaction cycle of growth in nuclear arsenals.³⁸⁷ If the United States deploys additional weapons to ensure it can hold at risk expanding nuclear arsenals and other counterforce targets, competitors in turn will feel compelled to consider even further force growth to ensure high confidence in their ability to retaliate after a disarming first strike attempt, regardless of how likely such an attack is or is assessed to be. Theoretically, there is a danger that such a cycle of competitive force expansion will never reach an end state that delivers enhanced security.³⁸⁸ More plainly, by this logic there is significant risk that any benefits the United States might accrue from deploying additional weapons to support counterforce against Russia and China would be offset by countervailing force buildups. This process, which would be characterized by many as arms racing, would impose heavy costs on the competitors, further strain their political relations, and doom prospects for nuclear risk reduction.

Some scholars point to evidence of this dynamic in decades past (albeit in a bilateral context) as an indicator that it is likely to be repeated in the emerging environment, leading to what would now be a destabilizing three-way nuclear arms race.³⁸⁹ Others take different lessons from nuclear history and point to some salutary effects of nuclear arms competition and prospects for forms of restraint, or argue that

385 Ibid.

386 Glazer, Acton and Fetter, op. cit. In arguing for counter-infrastructure targeting as an alternative to counterforce, the authors assert the following: “A small attack against an isolated industrial target would, like a small counterforce attack, inflict relatively little damage, but it would send a clearer signal by emphasizing that the use of nuclear weapons is about bargaining by inflicting costs, not destroying opposing forces in order to limit damage and thereby win the war.”

387 Also referred to in international relations theory as the “spiral model.” For a description and critical assessment, see Matthew Kroenig, “Arms Racing Under Nuclear Tripolarity: Evidence for an Action-Reaction Cycle?” Atlantic Council Issue Brief (December 2022). <https://www.atlanticcouncil.org/wp-content/uploads/2022/12/Arms-Racing-Under-Nuclear-Tripolarity-Evidence-for-an-Action-Reaction-Cycle.pdf>. Accessed June 28, 2024.

388 Glazer, Acton, and Fetter, op. cit. In the authors’ words: “...an arms competition that does not reach an equilibrium.”

389 Ibid. See also Kristensen, et al., op. cit., pp. 26-28.

in some circumstances arms racing is a necessary and bearable cost of competition (and therefore not destabilizing).³⁹⁰ A balanced assessment of the counterforce risk to arms race stability designed to inform wise policy should eschew both worst- and best-case assumptions. While stipulating that counterforce doctrine can indeed stimulate nuclear competition, in fact there are multiple sources of heightened competitive pressures.³⁹¹ These pressures are increasingly salient today absent any decisions by the United States to field a larger nuclear force. Such decisions would have the potential to add to these pressures, but certainly would not be the principal cause of the waning prospects for managing the competition in nuclear arms.

In any case, additional arms racing risks would have to be weighed against the security benefits of maintaining a counterforce posture. And, as with other forms of risk discussed above, the risk to arms race stability may be less pronounced if the United States chooses to forego a comprehensive counterforce or damage limitation capability and opts instead for something more limited.

“Relevance Risk” and Deterrence Opportunity Costs. Even if the strategic logic and benefits of counterforce prevail in any serious assessment of risk, there may still be questions about opportunity costs if maintaining an enduring counterforce capability in a two nuclear-peer world requires a major investment by the United States that compels defense leaders to consider difficult tradeoffs. A question that likely will be asked in this context will focus on defining those investments most relevant to the most pressing deterrence problems we face—a variant of the following: “Rather than investing in additional counterforce capabilities to keep pace with the growth in competitor nuclear arsenals (investments that likely would be offset in various ways), why not prioritize investments in conventional and/or theater nuclear capabilities that might deliver greater deterrent payoff by forestalling the point in any crisis when the large-scale use of central systems may need to be contemplated?” After all, our policy and strategy documents state that the most likely path to nuclear war is a conventional conflict that escalates to local or regional nuclear use. Should we not preferentially invest in the capabilities most likely to deter these developments and keep us far from the nuclear precipice? If not, are we assuming unnecessary risk?

Again, this question is most compelling if major investment tradeoffs are required. It may also seem misguided to those who believe that the characteristics of the central nuclear balance are highly relevant to both conventional deterrence and nuclear deterrence at the substrategic level. But the question may still be asked in some form as the costs of deeper investment in strategic forces are considered.

Domestic Political Risk. The U.S. Congress continues to fund the Program of Record (POR) as part of the overall defense budget, and to this degree it is fair to say that there is bipartisan support for nuclear modernization and, at least implicitly or by extension, for the nuclear strategy these forces are intended to underwrite.

390 For these and related arguments, see Kroenig, *Logic of American Nuclear Strategy*, op. cit., pp. 143-158.

391 Ibid. See also CGSR, op. cit., pp. 31-32.

But this consensus is also being challenged in a number of ways. Some prominent members of Congress with oversight responsibility for strategic policy and nuclear programs advocate for fielding capabilities beyond those currently envisioned in the modernization program, more or less in alignment with recommendations of the Strategic Posture Commission.³⁹² This advocacy is framed largely in terms of the need to keep pace with China's nuclear expansion and the growth in Russia's capabilities that might be expected if (and when) the New Start treaty expires in 2026—that is, in terms consistent with a counterforce approach.

On the other side of the political spectrum, some members of Congress increasingly challenge key elements of the POR, largely in reaction to significant programmatic cost growth.³⁹³ Whether this remains limited to a relatively small number of legislators already well-known for their nuclear skepticism or becomes more widespread remains to be seen. But there will almost certainly be additional “cost shocks” as the POR advances, and regardless of arguments about the relative costs of nuclear programs (e.g., in relation to the defense budget or gross domestic product) the absolute numbers will be large and could fuel further concern among a larger number of members about the viability or priority attached to the comprehensive modernization effort. These concerns may be expressed not just by those framing a “guns vs. butter” argument but also by some “defense hawks” focused on opportunity costs within the defense budget that may affect conventional programs seen as critical to deterring regional aggression.

If there is a growing challenge today to the costs associated with the POR, decisions taken in the period ahead by any administration to field a larger nuclear force and/or develop new capabilities in order to maintain the viability of existing U.S. targeting doctrine will only reinforce the trends pulling at the bipartisan nuclear consensus. Under these circumstances there may well be sufficient votes to enact the legislation needed to fund a counterforce-driven expansion of U.S. nuclear capabilities, but bipartisan support for the baseline POR—as well as other elements of U.S. nuclear policy—could diminish. And the prospects for a highly politicized

392 For example, Deb Fisher and Angus King, “The Nuclear Force Structure of the Past Will Not Suffice Now,” *The Washington Post* (September 17, 2023), and Roger Wicker, “21st Century Peace Through Strength: A Generational Investment In The U.S. Military,” <https://www.wicker.senate.gov/services/files/BC957888-0A93-432F-A49E-6202768A9CE0>. Accessed June 28, 2024.

393 For example, “Congressional Nuclear Weapons and Arms Control Working Group Announce Additional Oversight of U.S. Nuclear Weapons Spending,” <https://garamendi.house.gov/media/press-releases/congressional-nuclear-weapons-and-arms-control-working-group-announce>; “Co-Chairs of Congressional Nuclear Weapons and Arms Control Working Group Lead Letter to U.S. Secretary of Defense Regarding Concerns about Sentinel Intercontinental Ballistic Missile Program,” <https://garamendi.house.gov/media/press-releases/co-chairs-congressional-nuclear-weapons-and-arms-control-working-group-lead>; and John Garamendi, “A Congressional Perspective on Nuclear Weapons Spending and Arms Control,” Keynote remarks to Arms Control Association Annual Meeting, June 7, 2024, <https://www.armscontrol.org/2024AnnualMeeting/Garamendi-remarks>.

debate about the doctrine itself could grow. These political dynamics may not emerge, or may be manageable if they do. But the benefits of taking the steps needed to maintain an effective counterforce strategy should be weighed against the potential for catalyzing political shifts that could undermine bipartisan support for the POR— let alone for efforts to supplement it.

Closing Thoughts

No nuclear strategy is without risk. Advocates of maintaining an effective counterforce approach must be able to address the potential risks of doing so. While the risks discussed above have been refuted or addressed in various ways (in this volume and elsewhere), the fact is that there are sharp divides in the practitioner and academic communities on the benefits and risks of counterforce. This is hardly new, but because these divides reflect competing belief systems, threat assessments, and policy preferences, they are not easily reconciled. The task of policymaking is to chart a course of action even if it is marked by an irreducible degree of uncertainty borne of limited experience and information. This task is helped by “unpacking” to the degree possible some of the complexities that surround the choices to be made regarding targeting doctrine. As suggested above, questions of risk are not black and white; much depends on the specific ways the United States chooses to execute a counterforce strategy.

It is equally imperative to take a hard look at the risks associated with plausible alternatives to counterforce, especially at a time of growing nuclear dangers and new challenges to the assumptions that have informed U.S. nuclear policy for decades. Policymakers should be familiar with all responsible perspectives on these questions.

Limited War, Extended Deterrence, and Counterforce

Brad Roberts

In reflecting on the lessons of the surprise attack on Pearl Harbor, Thomas Schelling argued in 1962 as follows:

If we think of the entire U.S. government and its far-flung military and diplomatic establishment, it is not true that we were caught napping at the time of Pearl Harbor. Rarely has a government been more expectant. We just expected wrong. And it was not our warning that was most at fault, but our strategic analysis. We were so busy thinking through some “obvious” Japanese moves that we neglected to hedge against the choice they actually made...There is a tendency in our planning to confuse the unfamiliar with the improbable. The contingency we have not considered seriously looks strange; what looks strange is thought improbable; what is improbable need not be considered seriously.³⁹⁴

The debate about U.S. nuclear strategy is similarly afflicted with a tendency in some quarters to dismiss what might seem strange and improbable as unworthy of consideration. In this case, the “strange and improbable” is limited nuclear war. Former Secretary of Defense William Perry has argued (with a co-author Tom Collina) that limited nuclear war is a “myth.”

There is every reason to believe that, once attacked with atomic weapons, a nation would be so outraged, and would assume a full attack was on the way, that it would respond with everything they’ve got... It is unlikely that there is such a thing as a limited nuclear war and preparing for one is folly.³⁹⁵

Yet this appears to be precisely the kind of war for which Russia, China, and North Korea have been preparing. Thus, it is a contingency that needs to be considered seriously. Given our stake, we cannot afford to again “expect wrong.” Moreover, with their narrow focus on large-scale nuclear exchanges, Perry and Collina draw the conclusion that the dangers of counterforce outweigh its benefits and thus that the

394 Thomas Schelling, “Foreword to Roberta Wohlstetter,” *Pearl Harbor: Warning and Decision* (Stanford, CA: Stanford University Press, 1962), pp. vii-viii.

395 William J. Perry and Tom Z. Collina, *The Button: The New Nuclear Arms Race and Presidential Power from Truman to Trump* (Dallas, TX: BenBella Books, 2020), p. 100.

ICBM leg of the Triad should be retired. A focus on the limited war contingency seems likely to yield different perspectives on counterforce and the Triad.

To better understand the potential dynamics of limited nuclear wars in the current security environment, this chapter proceeds as follows. It begins with a review of thinking in Russia, China, and North Korea about regional confrontations with the United States and its allies under the nuclear shadow, as reflected in official statements and the writings of military experts. To help focus that review on key concepts, I invoke the term “theory of victory,” recognizing that this is a fraught term in the nuclear discourse, as it implies that a nuclear war can be won and thus might be fought.³⁹⁶ But it goes to the uncomfortable heart of the matter: the risk we face today is that the leaders in Moscow, Beijing, and Pyongyang may believe that a nuclear war can be fought and won because it can be kept limited. The chapter then turns to a discussion of thinking in the United States about how to wage deterrence in such confrontations—and its theory of deterrence victory. It then evaluates the roles of U.S. nuclear capabilities, counterforce, and otherwise, in enabling that theory. It closes with a summary of what would be lost to the United States in the management of such limited nuclear contingencies if it were to retire its counterforce strategy and capabilities.

Red Theories of Victory

The military assertiveness and dominance of the United States in the 1990s rang alarm bells in Moscow, Beijing, and Pyongyang.³⁹⁷ National leaders responded with new strategies and calls for military reform. Russia shifted its focus onto development of a new approach to regional war that would be viable in the context of NATO expansion. China shifted its focus onto local wars under high-tech conditions. North Korea shifted its focus onto wars of regime survival. Simultaneously, military analysts in all three countries set out to understand the new way of American war revealed in wars in Iraq, the Balkans, and Afghanistan and the implications of the U.S. pursuit of “full spectrum dominance.”

In describing their objectives, some Russian and Chinese military analysts used a common formulation: to deter and defeat a conventionally superior nuclear-armed major power and its allies and partners. This reflected their judgments that the United States could be expected to bring war to them, in accordance with its value-based grand strategy. Over time, their thinking came also to reflect leadership judgments that changes to the regional security orders in Europe and Northeast Asia were both necessary and possible.

396 Brad Roberts, *On Theories of Victory, Red and Blue*, Livermore Paper No. 7 (Livermore, CA: Center for Global Security Research, 2020).

397 This section draws heavily on *ibid.*, pp. 59-81.

Faced with common challenges, interests, and objectives, it is not surprising that the three capitols came to largely similar theories about how to safeguard and advance their interests in an armed confrontation with the United States—and also in conflict short of direct armed hostilities. Their theories emphasize coercion, blackmail, and brinkmanship. Nuclear capabilities, threats, and limited attacks play a central role. The main elements of their theories of victory can be abstracted as follows:

First, if war with the United States appears inevitable or advantageous because it is preoccupied elsewhere, it is necessary and possible to seize the initiative and create a *fait accompli*—and to do so without recourse to the employment of nuclear weapons. But to protect the *fait accompli*, it is necessary to project an image of a terrible price to be paid by the United States and its allies and partners if reversal is attempted. Here nuclear weapons play a valuable role in foreshadowing risk.

Second, if the United States chooses nonetheless to seek to reverse the *fait accompli*, it can be put in a position of having to act alone. U.S. allies and partners can be persuaded not to support the U.S. military effort through the use of coercive acts of various kinds including, but not limited to, nuclear threats and nuclear displays.

Third, if the United States chooses nonetheless to proceed, U.S. military action can be made costly to it by kinetic and non-kinetic attacks on the military forces directly engaged in the attempted restoration, on the forces en route to the theater, and on the territory and critical infrastructures of allies and partners still engaged. This puts the United States in the difficult position of having to choose between escalating and terminating a conflict without achieving its objectives. Russia has been the most explicit in articulating a role for the employment of non-strategic nuclear weapons in a regional war as a way to exert psychological pressure and achieve local military advantages.³⁹⁸

Fourth, if these efforts fail to bring timely war termination on the aggressor's terms and something significant of the aggressor's is newly at risk, such as the bulk of the forces that created the *fait accompli* or the survival of the regime that initiated the war, then the United States can be reminded that its homeland is vulnerable and that it has much to lose through further combat. This would involve limited attacks on the U.S. homeland, whether kinetic or non-kinetic, or both. This would put the United States in the difficult position of having to choose between further escalation once it has failed to achieve its objectives and terminating without achieving its objectives while under attack.

This way of thinking about how to deter and if necessary defeat the United States is informed by a key judgment military experts in those countries make about stake. In their view, any conflict with the United States on their periphery will involve stakes for them that are vital—and that for the United States are something short of vital. This asymmetry, they judge, lends credibility to their threats. Some conclude that it is

398 Dave Johnson, *Russia's Conventional Precision Strike Capabilities, Regional Crises, and Nuclear Thresholds*, Livermore Paper No. 4 (Livermore, CA: Center for Global Security Research, 2018).

possible to escalate, including to limited strikes with non-strategic nuclear weapons, in order to “sober but not enrage” the United States—that is, to awaken the United States to the underlying asymmetry of stake without provoking it so egregiously that it perceives new stake warranting a strong counter response. Toward this end, Russian military doctrine focuses on calibrating the proper dosage of damage.³⁹⁹

The leaders of Russia, China, and North Korea have put these ideas into practice. In the 2000s, Russia and China issued new military doctrine and initiated new procurement programs. In the intervening period, new capabilities have reached the field, where they have been exercised along with new doctrine. A central and as yet unanswerable question is how much Russia’s military performance in Ukraine has challenged thinking in Moscow and elsewhere about the viability of the theory of victory in regional war set out in the 1990s and 2000s. On the one hand, that experience must undermine the confidence of Russian leaders that reform and modernization have accomplished their intended objectives. On the other hand, the war being waged against Ukraine is being fought with the concepts designed for local war as opposed to regional war, as Russian military doctrine has defined them, and thus may not be seen in Moscow as a good test of the theory of coercive escalation.⁴⁰⁰

The Blue Theory of Victory

While political leaders and military experts in Russia, China, and North Korea focused on the new U.S. challenge, their American counterparts were focused on the wars of the 1990s and then the post-9/11 counter insurgencies in Afghanistan and Iraq. Only after Russia’s military-backed annexation of Crimea in 2014 was there a surge of interest in the emerging risks of confrontation with nuclear-armed adversaries. Accordingly, an American theory of victory in such confrontations has been slow to take shape. But key elements can be discerned from the available literature and guidance documents. They reflect the idea that it is possible to strip away the enemy’s confidence in his or her calculus of the benefits, costs, and risks of aggression at the regional level of a kind that implicates the United States.⁴⁰¹ These key elements include the following:

First, peacetime coercion of U.S. allies and partners by nuclear threats can be effectively negated so long as the U.S. threat to respond if struck is credible. Missile defenses in the region and protecting the American homeland play a reinforcing role; they serve to reduce vulnerability to missile strikes of a (limited) scale intended to have a coercive effect.

399 For further discussion, see *ibid.* and Roberts, *On Theories of Victory*, pp. 50-51.

400 Michael Kofman et al., *Russian Military Strategy: Core Tenets and Operational Concepts* (Alexandria, VA: Center for Naval Analyses, 2021).

401 This section draws heavily on Roberts, *On Theories of Victory*, pp. 59-81. See also *Deterrence Operations: Joint Operating Concept, Version 2.0* (Washington, DC: Department of Defense, 2006).

Second, *faits accomplis* can be deterred by composing and maintaining a conventional deterrent that cannot be readily overwhelmed. Such a force would also serve as a tripwire if attacked, inciting a strong political and thus military response (especially if the forces of multiple nations are attacked).

Third, U.S. allies can be sufficiently assured to keep them in the fight with the movement of forces to their defense, both defensive and offensive, and with the further integration of allied capabilities with those of the United States. They can also display their own resolve not to be coerced out of defending their interests, separately from the display of U.S. resolve to defend them.

Fourth, power projection can be sustained with better protection of key assets in their ports of embarkation and debarkation, more dispersed operations, and better homeland defense of critical infrastructure. Escalatory missile strikes by the enemy can be met with sharp and significant U.S. responses.

Fifth, attacks on the U.S. homeland can be deterred with a mix of defensive and offensive capabilities and clear declaratory policies.

Sixth, if at any stage of the conflict the enemy seriously contemplates nuclear attack, he or she will find the costs unbearable and the risks incalculable and thus unacceptable. This will be so because the United States can credibly threaten to employ nuclear forces at both the theater and strategic levels of war. If deterrence fails in a limited way this would result from the enemy's miscalculation of the asymmetry of stake and resolve. This could be corrected with a proportionate U.S. response, which would restore deterrence and help to set the political conditions for a de-escalation of the conflict. Missile defenses can also help to reduce the enemy's perceived benefits of attack; they may also impact judgments of risk, as they would complicate the challenge of getting the "dosage" right.

Some in the U.S. expert community also take a particular view of stake. They reject the adversary judgment that stake would necessarily favor the local power in a regional conflict. They judge that any war with a nuclear-armed major power rival would involve vital interests for U.S. allies and partners while also calling into question the credibility of the United States as a security guarantor and thus also the viability of U.S.-led security orders in Europe and Asia. Thus, they do not share the judgment that limited nuclear escalation by the aggressor would precipitate American capitulation. On the contrary, they see it as likely to increase American stake and resolve.

The two theories of victory, Red and Blue, are outwardly similar. But they are motivated by fundamentally different national objectives. As revisionist leaders, Putin, Xi, and Kim have a vision of victory involving the re-making of the regional and global orders and are the use of their tailored new strategies and capabilities toward that end. Deterrence of the United States is an important objective but not the primary one. Vladimir Putin may well believe that a regional war can go nuclear and be won because it can be kept limited. For the United States, the primary objective is to prevent the use of force to achieve those revisionist goals so that long-term competition is channeled away from military advantages and into political and

economic affairs. This puts deterrence, not warfighting, at the center of U.S. strategy. Recall the words of former Secretary of Defense Harold Brown, who famously argued that “we know there can be no winner in nuclear war and we want to ensure that the Soviets believe it too.”⁴⁰²

Enabling the Blue Theory of Victory

To underwrite this theory of victory, the United States is developing new capabilities. Many of these are non-nuclear, including theater and homeland missile defenses, deep precision non-nuclear strike capabilities, critical infrastructure resilience, and other capabilities in cyber space and outer space. The United States is also working with its allies and partners to strengthen regional deterrence architectures in a comprehensive manner that also supports improved integration.

U.S. nuclear capabilities are enablers of many of the elements of the Blue theory of victory:

- To negate nuclear coercion in peacetime, crisis, and war, U.S. allies depend on the U.S. “nuclear umbrella”—the capabilities that it forward deploys to Europe and are forward-deployable to Northeast Asia and elsewhere, along with the strategic cover provided by the Triad. The NATO nuclear sharing arrangements in particular are a demonstration of collective resolve and of the link to U.S. strategic forces.
- To deter enemy escalation to nuclear first use in theater, the United States needs to be seen to have theater nuclear forces sufficiently robust to survive preemptive strike and sufficiently flexible to enable a proportionate response in the circumstance created by the attacker.
- To restore deterrence if the enemy has crossed the nuclear threshold with limited in-theater strikes, the United States needs the ability to credibly foreshadow significant future nuclear risk in theater if the attacker chooses to continue employing nuclear weapons there.
- To deter limited nuclear attacks on the U.S. homeland aimed at awakening the United States to significant future nuclear risk, the United States needs the capability to respond proportionately and to foreshadow future risk without increasing the risk to major elements of the deterrence.
- To deter larger scale attacks on U.S. strategic forces, the United States needs sufficiently robust and diverse forces to operate effectively from a degraded posture.

402 Cited in Michael Getler, “Brown: Arms Superiority Out of Reach,” *The Washington Post* (July 29, 1980).

This analysis leads to the conclusion that effective deterrence of limited nuclear regional war requires that the United States deploys a diverse and flexible nuclear force including both strategic and non-strategic nuclear weapons (in addition to missile defenses and other non-nuclear means of deterrence).

The Impact of CF Retirement

But what in particular do U.S. counterforce capabilities contribute to enabling U.S. deterrence strategy vis-à-vis limited nuclear regional war? Put differently, would the United States lose something essential if it were to retire the counterforce mission and capabilities?

The most direct negative effects would be at the higher end of the escalation ladder. Retirement would reduce Red's perceived risk of escalation to nuclear attacks on the U.S. homeland by eliminating the leg of the Triad most suitable for discriminate use in a limited escalation scenario. To be sure, other capabilities would remain for a U.S. nuclear response. But the air leg might not be available for this purpose, if bombers and tankers have been diverted to the conventional mission or if their readiness for the nuclear mission has not been increased out of a desire not to aggravate a mounting crisis. The submarine leg might also not be available for the purpose of limited nuclear strikes, if there is a significant risk that launch operations will reveal the location of the SSBN, thereby putting its survival at risk. Retirement of the CF mission and capabilities would also reduce the ability of the force to operate from a degraded position in response to a large-scale attack.

These higher end effects could be expected to have a cascading effect on risk-taking at the lower end of the escalation ladder. Confidence that the high-end risks are knowable and tolerable would increase the propensity to take risks at the low end with limited use in theater of non-strategic weapons.

Retirement would also likely be interpreted by some in the capitals of U.S. adversaries as confirmatory proof of their existing belief that the United States is in decline and retreat from its international leadership role. It would certainly signal a significant departure from the course of nuclear modernization charted by the last four presidential administrations, both Republican and Democratic, as well as two bipartisan commissions. This might be misinterpreted as a confirming a new lack of resolve to defend U.S. and allied interests because of the new nuclear dangers now taking shape. If such views take hold, adversary leaders will become even more risk-taking, resulting in more nuclear-backed coercion and probing of U.S. and allied resolve.

The change of course would not go unnoticed by U.S. allies, whose assurance remains a top, bipartisan policy commitment. Many would find troubling a major departure from the long-standing bipartisan modernization pathway. Some would interpret it as a harbinger of further American strategic retreat, leading them to fear of becoming even more vulnerable to nuclear coercion or attack.

In sum, retirement of these capabilities would have a significant impact on U.S. deterrence strategy vis-à-vis limited regional nuclear war, stripping away some important elements. To be sure, this might not cripple U.S. strategy for this purpose, given the availability of other means for nuclear and other responses to nuclear attack. But it would introduce even more risk into that strategy at a time when the United States has already accepted a great deal of risk and is committed at the highest levels to reduce such risks.

Conclusions

Although improbable, limited nuclear regional war is not a myth. Sound strategic analysis requires that it be taken seriously by the United States and its allies and partners. The preparations of Russia, China, and North Korea for regional wars under the nuclear shadow are well advanced. Preparations to ensure that deterrence remains effective in the crises they might precipitate are not folly.

Their theories of victory in such confrontations require a countering theory of our own, which has begun to come together. It focuses on shaping the adversary leadership's calculus of the benefits, costs, and risks of different courses of action in a manner that strips away their confidence in their theories of victory. This requires that the United States and its allies and partners have available to them a diverse set of nuclear and non-nuclear capabilities. The required nuclear capabilities include both diverse strategic systems and a sufficiently robust and flexible forward-deployed and -deployable component.

Counterforce capabilities contribute significantly to the effectiveness of U.S. deterrence strategy vis-à-vis limited regional nuclear wars. They provide an option for limited responses to limited nuclear attacks on the U.S. homeland that is superior to the options provided by the other legs of the triad. They also help to ensure that the risks of large-scale war cannot be ignored but also cannot be calibrated with confidence. By expecting correctly and hedging appropriately, we can help to ensure that leaders in Moscow, Beijing, and Pyongyang do not catastrophically miscalculate in the way that their predecessors in Tokyo, Berlin, and Rome did eight decades ago.

Counterforce and Deterrence in Europe

Counterforce at the Regional Level of War: A European Perspective

*Jacek Durkalec*⁴⁰³

The debate on the benefits and pitfalls of counterforce have primarily focused on the counterforce at the strategic level.⁴⁰⁴ This chapter seeks to broaden the scope of this debate by focusing on a counterforce strategy at the regional level of war. To do so, I first discuss the definition of regional counterforce before turning to examining three questions. First, what are potential challenges to adopting a regional nuclear counterforce strategy by the United States and its NATO allies? Second, what would be the potential added value of a regional counterforce strategy, and how could the benefits of a regional counterforce strategy outweigh potential risks? Lastly, what are policy implications of this analysis?

I argue that in light of the intensifying nuclear challenges to the Alliance, regional level counterforce deserves serious re-examination. The adoption of such strategy by NATO, enabled by the emerging technologies, could bolster deterrence in the face of Russia's increasing nuclear threats and the deteriorating global nuclear landscape. Indeed, the benefits of regional counterforce to strategic stability in the Euro-Atlantic area outweigh the potential risks associated with this strategy.

Defining Counterforce at the Regional Level of War

In this study, I define counterforce at the regional level of war as a deterrence strategy that relies on holding at risk an adversary's non-strategic nuclear weapons and their associated delivery systems. This is not solely a nuclear strategy. Rather, it is a multi-domain strategy that utilizes the whole range of means—nuclear and non-nuclear—to reduce an adversary's confidence in the benefits of use (or threat of use) of its non-strategic nuclear weapons (NSNW) for intimidation, escalation management, and/or warfighting.

A nuclear counterforce strategy at the regional level has unique features that distinguish it from a nuclear counterforce strategy at the strategic level: the deterrence logic of the strategy, the set of targets covered by regional counterforce, and the means with which to implement it.

First, while the strategic level counterforce is primarily oriented at strengthening the credibility of deterrence by retaliation, a regional counterforce strategy relies on a strategy of deterrence by denial. The deterrent effect it seeks to create rests on shaking an adversary's confidence in its ability to employ non-strategic nuclear weapons

403 These are solely the opinions of the author. The author would like to thank Ray Hughes, Rupal Mehta, John Olsen, Diego Ruiz Palmer, Jim Stokes, David Ucko, and David Yost for comments to earlier drafts of this paper.

404 See Brad Roberts' introduction to this volume.

effectively at the desired scale. In the context of strategic competition that remains short of combat, regional counterforce strategy aims to undermine the adversary's perception that the regional nuclear balance is in its favor, thus complicating an adversary's calculations that a regional nuclear edge can be leveraged for intimidation or shielding conventional aggression. During conflict, this strategy seeks to complicate an adversary's decision to employ non-strategic nuclear weapons by undermining its confidence in limited employment of non-strategic nuclear forces to achieve political-military objectives. It also seeks to create doubts about an adversary's ability to effectively employ non-strategic nuclear weapons at a large scale.

To be effective, regional counterforce does not require the ability to destroy all non-strategic nuclear weapons possessed by an adversary. Such capability is neither desirable nor feasible, as a potential adversary could develop a variety of options to conduct nuclear strikes. Yet, putting at risk only a portion of non-strategic nuclear weapons would likely be sufficient to complicate an adversary's calculus and targeting requirements, and thus could undermine adversary's confidence in nuclear brinkmanship at the regional level.

While relying on deterrence by denial, a regional counterforce strategy does not supplant the need for credible deterrence by retaliation. It seeks to complement credible regional retaliatory nuclear capabilities by creating additional dilemmas for an adversary—that is, not only would an adversary's nuclear attack be met with unacceptable consequences, but the ability to conduct such strike at the desired scale could be negated.

Second, similar to strategic-level counterforce, regional counterforce seeks to negate an adversary's confidence to effectively employ its nuclear weapons. In contrast, however, it focuses exclusively on undermining an adversary's confidence in using non-strategic nuclear weapons. In the context of the Euro-Atlantic security environment, these weapons are defined as nuclear warheads and associated delivery vehicles that have never been a part of U.S.-Soviet/Russia strategic arms control. This applies to what Russia defines as “tactical nuclear weapons—that is, weapons ‘designed to engage objects in the tactical depth’ (usually within 300km) along with operational nuclear weapons, weapons that are ‘designed to engage objects in the operational depth’ (the entire European theatre, usually beyond 500 km).”⁴⁰⁵

Regional counterforce strategy is not directed against an adversary's strategic nuclear capabilities. Targeting an adversary's strategic assets is left to strategic-level counterforce and falls beyond the scope of regional counterforce. This is despite the fact that an adversary could use its strategic assets against regional targets,

405 *NATO-Russia Glossary of Nuclear Terms and Definitions* (January 2007). <https://www.nato.int/docu/glossary/eng-nuclear/eng-app3.pdf>. Accessed August 6, 2024. For discussion on definitions of NSNW, see: William Alberque, “Russian Military Thought and Doctrine Related to Non-strategic Nuclear Weapons: Change and Continuity,” IISS (January 2024), pp. 6-7; Paul Schulte et al., “THE WARSAW WORKSHOP: Prospects for Information Sharing and Confidence Building on Non-Strategic Nuclear Weapons in Europe,” The Polish Institute Of International Affairs, Norwegian Institute For Defence Studies, Carnegie Endowment For International Peace (April 2013), pp. 10-11.

and that capabilities used for regional counterforce could also target a portion of an adversary's strategic capabilities.

Regional counterforce strategy may encompass holding at risk an adversary's non-nuclear forces and command and control. But it does so only to degrade an adversary's ability and confidence in using its non-strategic nuclear weapons. Targeting these capabilities per se is not the aim of regional counterforce. Similarly, regional counterforce is not aimed at targeting what a potential adversary likely values the most, which are regime survivability and population centers.

Lastly, the means of regional-level counterforce differ from strategic-level counterforce. While the latter mostly relies on the use of strategic nuclear systems to target an adversary's strategic capabilities, the former relies mostly on non-nuclear capabilities. With a greater reliance on non-nuclear capabilities, regional counterforce attacks can be executed without a need for parity with an adversary's non-strategic nuclear weapons, and without a need for theater nuclear capabilities which have characteristics suitable for destroying time-sensitive targets. Counterforce requirements, therefore, provide a complementary non-nuclear component to nuclear force-sizing construction at the regional level.

While relying on offensive means, regional counterforce strategy can be reinforced by defensive means. In particular, missile defense systems could contribute to further stripping an adversary's confidence in its ability to employ non-strategic nuclear weapons by providing protection against such attack. This could further enhance deterrence by the denial effects of regional counterforce. If deterrence fails, the mix of offensive counterforce and defensive systems could contribute to damage limitation; that is, reducing losses to NATO countries' populations, forces, or economies resulting from an adversary's attack.

Challenges to Adopting Regional Counterforce in Europe

To date, a regional counterforce strategy has not been a central element of U.S. extended deterrence or broader NATO nuclear strategy. There are four plausible explanations for this lacuna: the nuclear legacy of the Cold War, NATO's more urgent nuclear adaptation priorities in the past decade, practical challenges for effective counterforce, and concerns about strategic stability risks. Each of these explanations deserves attention.

Cold War Nuclear Legacy

Regional counterforce was part of the nuclear employment strategy for the United States and NATO during the Cold War. For example, in the early 1960s, the prioritized list of SACEUR's nuclear targets included the Soviet medium-range ballistic missile sites, bases for Soviet nuclear-capable aircraft, or nuclear storage sites. To assure the European allies about its commitment to European defense, the United States emphasized that it placed "the major Soviet nuclear forces threatening Europe in

the same high priority category as those also able to reach North America.”⁴⁰⁶ This followed concerns expressed by some European politicians that the United States would prioritize destroying Soviet targets able to reach its own territory, potentially leaving the Soviet nuclear systems that threatened Europe partially or wholly untargeted.⁴⁰⁷

Yet, shaking Soviet confidence in its ability to use nuclear forces against regional targets was not a central element of NATO’s nuclear deterrence in the Cold War. This is reflected in the evolution of NATO’s nuclear strategy.⁴⁰⁸ Initially, in the 1950s, theater nuclear forces in Europe were aimed at achieving battlefield victory—or at least preventing battlefield defeat—against the quantitatively superior Soviets, and since 1955, Warsaw Pact conventional forces. NATO strategy to achieve this goal envisioned employing tactical nuclear weapons against opposing military units, in conjunction with U.S. intercontinental nuclear strikes against the Soviet Union. The planning at that time assumed that the tactical nuclear use could complicate and channel the movement of the Warsaw Pact forces on the battlefield to either make them more vulnerable or to deny them an ability to concentrate. NATO also aimed tactical nuclear weapons at adversaries’ airfields, assembly areas, lines of communication, and bridges. At that time, some military planners believed that “the defender was at an advantage in tactical nuclear warfare, because the aggressor had to concentrate and maneuver, exposing himself to detection and nuclear fire.”⁴⁰⁹

With the adoption of the flexible response strategy in 1967, NATO’s nuclear strategy evolved to the political aim of war termination. Instead of a nuclear warfighting strategy, NATO’s concept of nuclear operations shifted to employing limited numbers of theater nuclear forces (after NATO’s conventional defeat) to halt Soviet aggression and enable terminating the war. Using nuclear weapons amounted to crossing “an absolute threshold and would introduce into the conflict a profound qualitative change which is accompanied by profound risks to both sides.”⁴¹⁰ If follow-on use had to be taken, the purpose would be the same as the initial use—that is, to convince the enemy to reassess objectives, cease attack, and withdraw. The political function assigned to nuclear weapons derived from the judgement that the use of nuclear weapons in a theater war would provide no military advantages for NATO.

406 Statement made by Secretary McNamara at the NATO Ministerial Meeting in Athens (May 5, 1962), p. 5. https://ia800403.us.archive.org/5/items/McNamaraAthensSpeechToNATO/ELS012-056_text.pdf.

407 Timothy Andrews Sayle, “A nuclear education: the origins of NATO’s Nuclear Planning Group,” *Journal of Strategic Studies* 43, no. 6-7, p. 939.

408 The following discussion draws on: *The History of NATO TNF Policy: The Role of Studies, Analysis and Exercises. Conference Proceedings. Volume 1, “Introduction and Summary,”* R. L. Rinne, ed., Sandia National Laboratories, SAND91-8010/1 (February 1994); J. Michael Legge, *Theatre Nuclear Weapons and the NATO Strategy of Flexible Response*, R-2964-FF (Santa Monica, CA: RAND Corporation, 1983), pp. 7-37; and Diego Ruiz Palmer, “A Strategic Odyssey: Constancy of Purpose and Strategy-Making in NATO, 1949-2019,” NATO Defense Colleges Research Paper, no. 3 (2019).

409 *The History of NATO TNF Policy* ... op. cit., p. 35.

410 *Ibid.*, p. 48.

To affect an adversary's risk calculus and restore deterrence, the selective employment plans developed by SHAPE during the Cold War included demonstrative use, battlefield use, or maritime use of nuclear weapons.⁴¹¹ NATO's nuclear deterrence did not rely on the ability to target Soviet regional nuclear systems. Even Pershing II ballistic missiles and Gryphon ground-launched cruise missiles—deployed in the 1980s and later eliminated by the 1987 Intermediate Range Nuclear Forces Treaty—that gave NATO a theoretical capability to destroy Soviet SS-20 ballistic missiles were not aimed at targeting these Soviet nuclear capabilities. Their goal was to provide the Alliance with the credible long-range in-theater option to assure European allies and reduce the risk of the Soviet miscalculation that the European theater could be “decoupled” from the U.S. strategic deterrent.⁴¹²

With other priorities for NATO's nuclear strategy, shaking the Soviet Union's confidence in its capability to launch non-strategic nuclear weapons against the regional targets was not the Alliance's priority. This did not change in the 1990s and the 2000s, given a lack of tangible nuclear threats to the Alliance and the widespread lack of interest in nuclear deterrence writ large. This has significant implications for the present and the future. While the Cold War nuclear debates created a rich legacy on which to build, these debates did not provide a clear blueprint for analyzing the benefits and pitfalls of a regional counterforce strategy. They did not create a tradition of thinking in terms of regional counterforce. If NATO were to adopt such an option, there is no sufficient Cold War nuclear legacy that could be easily translated to the requirements of the 21st century.

NATO's Nuclear Adaptation Priorities

Over the last decade, NATO embarked on a process of updating its nuclear deterrence policy, capabilities, and posture. This followed nearly three decades of nuclear strategy stasis, when the main focus was to reduce the roles of nuclear weapons in the Alliance.⁴¹³ The impetus and urgency for NATO's nuclear re-emphasis were given by Russia's use of nuclear intimidation to back-stop its conventional aggression against Ukraine in 2014 and with its full-scale invasion in 2022. Several Russian actions have deteriorated the nuclear landscape in Europe: the sharp increase in Moscow's irresponsible nuclear rhetoric; large-scale nuclear exercises timed with the 2014 and 2022 invasions of Ukraine; its efforts to undermine nuclear arms control through violations of the Intermediate Range Nuclear Forces Treaty (INF), and the suspension of the New START Treaty; the development of novel nuclear

411 See more, for example: Nuclear Planning Group, Selective Employment Policy (March 11, 1982), PO/82/32, Annex, p. 3, declassified - PDN(2014(0006). Available via NATO Archives; The History of NATO TNF Policy ... op. cit., pp. 51-52, 55.

412 Ibid., p. 57. See: Andreas Lutsch, “The Zero Option and NATO's Dual-Track Decision: Rethinking the Paradox,” *Journal of Strategic Studies* 43, no. 6-7 (2020), pp. 957-989.

413 See more: Jacek Durkalec, *The 2018 U.S. Nuclear Posture Review, NATO's Brussels Summit and Beyond* (Livermore, CA: Center for Global Security Research, June 2018), pp. 4-7; Alexander Mattelaer, “A Nuclear Alliance,” in: *Routledge Handbook of NATO*, Olsen, ed. (Milton Park, UK: Routledge, 2024).

delivery systems; the announced deployment of nuclear weapons to Belarus; and the pursuit of a nuclear intimidation campaign intended to sow disunity among NATO allies and prevent meaningful military assistance to Ukraine.⁴¹⁴

NATO had to revitalize its nuclear deterrence to address different potential scenarios of Russia's nuclear use. This included a scenario in which Russia is losing a conventional fight with the Alliance and resorts to limited employment of non-strategic nuclear weapons to terminate conflict on favorable terms. NATO also had to prepare to deter Russia's early use of non-strategic nuclear weapons in a conflict as a part of an integrated conventional-nuclear warfighting strategy, both to destroy NATO forces and to intimidate Allied leaders into conceding Russian gains (i.e., seized Allied territory).⁴¹⁵

The main concern of the United States and its European allies has been to convince Russia that NATO has the resolve and capabilities necessary to deter such an attack (or respond to it), and that in any hypothetical scenario, nuclear employment against the Alliance would lead to the worst outcome for Russia.⁴¹⁶ The logic behind this strategy relied on the ability to retaliate and impose significant costs on Russia.

As a result, over the last decade NATO engaged in efforts to upgrade its "nuclear hardware" and update its "nuclear software." The former included implementation of decisions taken in the early 2010s, such as the transition to the B61-12 nuclear gravity bomb and the F-35A as a Dual-Capable Aircraft (DCA) delivery platform. NATO's nuclear retaliatory capability also was strengthened by the introduction of a U.S. low-yield nuclear weapon on a sea-launched ballistic missile (SLBM), as envisaged by the 2018 U.S. Nuclear Posture Review. Updates to NATO's "nuclear software" have included improved strategic communications, planning, exercises, and efforts towards greater conventional-nuclear integration.⁴¹⁷

Focused on the most urgent needs, NATO's ongoing nuclear adaptation has been shaped by an implicit emphasis on how to maintain credible regional nuclear deterrence by retaliation. This did not permit a more fundamental rethinking on nuclear strategy at the regional level that would include political or military

414 See more: NATO, "Washington Summit Declaration issued by the NATO Heads of State and Government participating in the meeting of the North Atlantic Council in Washington, DC" (July 10, 2024), para. 19; Clara Arndt and Liviu Horovitz, "Nuclear rhetoric and escalation management in Russia's war against Ukraine: A Chronology," SWP (September 3, 2022). https://www.swp-berlin.org/publications/products/arbeitspapiere/Arndt-Horovitz_Working-Paper_Nuclear_rhetoric_and_escalation_management_in_Russia_s_war_against_Ukraine.pdf (accessed August 5, 2024); Jacek Durkalec, "Nuclear-Backed 'Little Green Men': Nuclear Messaging in the Ukraine Crisis, PISM Report" (July 2015). <https://pism.pl/upload/images/artykuly/legacy/files/20165.pdf>. Accessed August 5, 2024.

415 For different potential scenarios of Russia's non-strategic nuclear weapons use, see for example: Max Seddon, Chris Cook, "Leaked Russian military files reveal criteria for nuclear strike," *FT* (February 28, 2024).

416 Gregory Weaver, "The urgent imperative to maintain NATO's nuclear deterrence," *NATO Review* (September 29, 2023). <https://www.nato.int/docu/review/articles/2023/09/29/the-urgent-imperative-to-maintain-natos-nuclear-deterrence/>. Accessed August 6, 2024.

417 On NATO's progress, see: Jacek Durkalec, "NATO strategy to counter nuclear intimidation," in NDC Research Paper no. 10, *Recalibrating NATO Nuclear Policy*, Andrea Gilli, ed. (June 2020), <https://cgsr.llnl.gov/content/assets/docs/Recalibrating-NATO-Nuclear-Policy.pdf> (accessed August 5, 2024); Brad Roberts, "NATO's Nuclear Deterrent: Fit for Purpose? SIRIUS" (Zeitschrift für strategische Analysen, *Journal for Strategic Analysis* 7, no. 3 (September 2023), <https://cgsr.llnl.gov/content/assets/docs/Roberts-SIRIUS-Final.pdf> (accessed August 6, 2024).

requirements for a counterforce strategy. There was also no public debate on whether or how NATO's overall nuclear strategy could benefit from adding, to the Alliance deterrence toolbox, the option of regional nuclear counterforce. This followed the logic that reliance on deterrence by retaliation would be sufficient to ensure deterrence. And as long as NATO has a credible retaliatory capability, Russia's regional nuclear advantage does not practically matter.

Practical challenges

Regional-level counterforce has not been a central element of NATO's strategy, given daunting practical challenges of effective counterforce operations in terms of authorization, targeting, planning, and investment. These challenges resulted from the vast number and variety of Russia's non-strategic nuclear warheads and delivery systems, the dual-capability and mobility of its delivery systems, and the escalatory risks of attacking, much less destroying, nuclear weapons storage sites.

At the height of the Cold War, the Soviet Union had thousands of various non-strategic nuclear warheads and delivery vehicles. Despite reciprocal unilateral presidential declarations to reduce the stockpile of non-strategic nuclear weapons following the end of the Cold War,⁴¹⁸ Russia's tactical nuclear arsenal has remained large and diverse. It is estimated that Russia has "roughly 1,000 to 2,000 NSNWs," including but "not limited to warheads for air-to-surface missiles, gravity bombs, depth charges, torpedoes, anti-aircraft, anti-ship, anti-submarine, anti-ballistic missile systems, and nuclear mines, as well as nuclear warheads for Russia's dual-capable ground-launched missile systems."⁴¹⁹

Russia continues to expand and modernize its large and diverse set of nonstrategic systems.⁴²⁰ The most significant additions have been long-range precision strike missiles deliverable from ground, air, or sea. These systems include SSC-8 intermediate range cruise missiles [deployed in contravention to the Intermediate Range Nuclear Forces Treaty (INF)], Kinzhal air-launched ballistic missiles, the Kalibr family of sea-launched cruise missiles, and Zircon sea-launched hypersonic missiles.⁴²¹ The increasing number and variety of Russia's non-strategic

418 The 1991-1992 Presidential Nuclear Initiatives were agreed but unilateral and non-verifiable commitments made by the United States and the Soviet Union/Russia that were not bound by an arms control treaty. See: Susan J. Koch, "The Presidential Nuclear Initiatives of 1991-1992," CSWMD Case Study 5, National Defense University (September 2012). <https://ndupress.ndu.edu/Media/News/Article/718052/the-presidential-nuclear-initiatives-of-1991-1992/>. Accessed August 5, 2024.

419 U.S. Department of State, *Report to the Senate on the Status of Tactical (Nonstrategic) Nuclear Weapons Negotiations Pursuant to Subparagraph (a)(12)(B) of the Senate Resolution of Advice and Consent to Ratification of the New START Treaty* (April 16, 2024). <https://www.state.gov/report-on-the-status-of-tactical-nonstrategic-nuclear-weapons-negotiations/>. Accessed August 5, 2024.

420 Office of the Director of National Intelligence, *Annual Threat Assessment of the U.S. Intelligence Community* (February 2024), p. 16.

421 Jill Hruby, "Russia's New Nuclear Weapon Delivery Systems. An Open-Source Technical Review," *Nuclear Threat Initiative* (November 2019). <https://www.nti.org/analysis/articles/russias-new-nuclear-weapon-delivery-systems-open-source-technical-review/>. Accessed August 5, 2024.

nuclear systems were assessed to be a major driver behind the projected increase in Russia's overall nuclear stockpile.⁴²²

The number and variety of Russia's delivery vehicles make regional-level counterforce challenging in its own right. Doing so effectively requires a vast number of diverse capabilities to detect, track, and destroy a variety of systems that can be deployed on land, air, and sea. What adds to the challenge is that all of Russia's nuclear delivery systems are dual-capable, meaning they can deliver either nuclear or conventional payloads. Once tactical nuclear weapons are transported from storage sites and mated to delivery systems, determining which of them are loaded with nuclear warheads is nearly impossible. Tracking Russian non-strategic nuclear weapons deployed on transporter erector launchers (TELs) or attack submarines seems an almost insurmountable challenge because these systems are mobile and easy to hide.

Designing and producing regional counterforce capabilities to destroy non-strategic nuclear weapon storage sites before weapons are dispersed and loaded on delivery vehicles also pose significant practical and political challenges. To forestall attacks on its nuclear storage sites, Russia's non-strategic nuclear warheads, which normally are de-mated from delivery vehicles,⁴²³ could be uploaded on different platforms during the early phase of a crisis or conflict. Russia also could deploy countermeasures to undermine NATO's ability to target and attack non-strategic nuclear weapons storage sites. This could involve deploying more of them, further geographic dispersal, or delegating the authority for use to a lower operational level.⁴²⁴ Any pre-emptive attack on Russian nuclear weapon storage sites would create extreme political difficulties for NATO as a defensive Alliance.

Because of all these challenges, political and practical, the prospects for an effective theater-level counterforce look daunting. Needed would be the capabilities to destroy thousands of Russian warheads (that are deployable in a short timeframe on ground, air, or sea delivery platforms), and which are indistinguishable from conventionally-armed delivery vehicles and platforms and difficult to track when dispersed. Further, their destruction in a pre-emptive strike, even during a conventional war against Russia, could be politically unacceptable due to their perceptions of escalation risks. Given that counterforce at the regional level is difficult to achieve, some might ask: Why bother trying?

422 Lt. Gen. Robert P. Ashley, Jr., "Russian and Chinese Nuclear Modernization Trends. Remarks at the Hudson Institute" (May 29, 2019). <https://www.dia.mil/Articles/Speeches-and-Testimonies/Article/1859890/russian-and-chinese-nuclear-modernization-trends/>. Accessed August 5, 2024.

423 See: Pavel Podvig, "Non-strategic weapons storage and deployment procedures in Russia" (October 7, 2022), <https://russianforces.org/cgi-bin/mt/tb.cgi/1535> (accessed August 5, 2024); Congressional Research Service, "Nonstrategic Nuclear Weapons, RL32572," (March 7, 2022), p. 34.

424 For discussion on countermeasures to counterforce, see: Paul van Hooft and Davis Ellison, "Good Fear, Bad Fear. How European defence investments could be leveraged to restart arms control negotiations with Russia," The Hague Centre for Strategic Studies (April 2023), p. 6.

Strategic Stability Risks

The lack of serious analyses about regional counterforce strategy in Europe could also be explained by concerns that such a strategy could seriously imperil strategic stability in the Euro-Atlantic area. This encompasses potential detrimental consequences of regional counterforce for arms race stability, crisis stability, and negative spillovers to strategic stability.

“Arms race stability” at the regional nuclear level could be broadly defined as the absence of real or perceived incentives to significantly (either qualitatively or quantitatively) augment non-strategic nuclear forces to ensure the credibility of regional nuclear capabilities.⁴²⁵ According to the traditional arms race stability argument, regional counterforce strategy would undermine arms race stability in Europe, adding to regional volatility. This is because any Allied investments in capabilities aimed at negating Russia’s regional nuclear advantages would only incentivize Russia’s further investments in the size and quality of its non-strategic nuclear stockpile. Thus, instead of diminishing the value of Russia’s non-strategic nuclear weapons, NATO Allies would only face more Russian weapons.⁴²⁶

“Crisis stability” at the regional level refers to a crisis situation where there is no incentive to use non-strategic nuclear weapons owing to a fear that an adversary’s actions would preclude effective nuclear employment later in a conflict. The “crisis stability” argument against a regional counterforce strategy is that NATO’s nuclear counterforce capabilities would only reinforce Russia’s long-held fears about a disarming U.S./NATO aerospace attack. This might create additional incentives for Russia to employ dual-capable systems en masse early in a conflict to gain decisive advantage. Russia might also be incentivized to use non-strategic nuclear weapons early in a conflict to avoid a “use it or lose it” situation.⁴²⁷ Targeting Russian non-strategic nuclear forces might also influence the risk calculus of Russia in a way that causes unintended escalation.

The further argument against regional counterforce is that arms race and crisis instabilities arising as a result of adopting such a strategy could further diminish any prospects for future nuclear arms control in Europe. Given the likelihood of Russia’s counteractions, regional counterforce would erase any Russian incentives to provide greater transparency about its opaque non-strategic nuclear weapons posture and willingness to decrease the size or diversity of its non-strategic nuclear arsenal.⁴²⁸

A final argument against regional counterforce is that this strategy could lead to negative spillover effects at the strategic level. Particularly, given that, unlike during

425 On definitions of “arms race stability” and “crisis stability,” see, for example: Corentin Brustlein, “The Erosion of Strategic Stability and the Future of Arms Control in Europe,” *Proliferation Papers*, no. 60 (November 2018), pp. 18-19.

426 Such arguments are made also in the East Asia context. See: Ian Bowers, Counterforce Dilemmas and the Risk of Nuclear War in East Asia, *Journal for Peace and Nuclear Disarmament* 5, no. 1 (2022), pp. 16-18.

427 See: Ian Bowers, op. cit., pp. 16-18.

428 See, for example, discussion in: Keir A. Lieber and Daryl G. Press, “The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence,” *International Security* 41, no. 4 (Spring 2017), pp. 11-12.

the Cold War, all Russian non-strategic nuclear systems are deployed inside Russian territory—with the possible exceptions of Belarus and Crimea—any attack on these systems could trigger Russia’s strategic response against the United States. Thus, instead of contributing to keeping limited war limited, such a strategy could precipitate large-scale strategic nuclear exchange.

Furthermore, even though regional counterforce would by definition not target Russia’s strategic nuclear systems, NATO’s possession of regional counterforce capabilities could be perceived by Russia as aimed at its strategic nuclear forces. One could certainly expect an increase in official rhetoric and disinformation to support this narrative, as Russia has consistently done for decades concerning U.S. and NATO missile defenses. This, in turn, could lead to Russia’s decision to expand its strategic nuclear capabilities and emphasize its readiness to launch strategic forces on warning, undermining arms race and crisis stability at the strategic level.

The Case for Regional Counterforce Strategy in Europe

The explanations above highlight how potentially challenging, redundant, and even counterproductive a regional nuclear counterforce strategy could be. There are, however, several arguments why regional counterforce remains a potential option to further strengthen NATO’s deterrence against Russia’s nuclear intimidation. I argue that a NATO regional nuclear counterforce capability should matter considering Russia’s assessment of the regional nuclear balance, extended deterrence challenges in the Indo-Pacific, emerging technologies, and the overall benefits of maintaining strategic stability in Europe. The following section explores each of these mechanisms in detail.

Russian Assessment of the Regional Nuclear Balance

Over the last decade, Russia’s political and military leadership has expressed increasing confidence in Russia’s regional nuclear superiority. Russia’s quantitative advantage over NATO and its wide array of new regional delivery systems—amounting to a “nuclear scalpel for every problem in Europe”—have translated into President Putin’s growing perception of Russia’s nuclear superiority in Europe.⁴²⁹

This expressed confidence helps to explain Putin’s rejection of NATO’s efforts to increase confidence and transparency related to nuclear weapons in Europe in 2012.⁴³⁰ In the following years, Putin boasted about the added value of new regional dual-capable systems, in particular Kinzhal air-launched and Zircon sea-launched

429 See: Jacek Durkalec, *Russian Net Assessment and the European Security Balance*, Livermore Papers on Global Security No. 13, (Livermore, CA: Center for Global Security Research, March 2024), pp. 140-144, 149-159.

430 “Prime Minister Vladimir Putin meets with experts in Sarov to discuss global threats to national security, strengthening Russia’s defences and enhancing the combat readiness of its armed forces” (February 24, 2012). <http://archive.premier.gov.ru/eng/events/news/18248/>.

hypersonic missiles. Further, Putin claimed that the speed of these weapons gave Russia unparalleled capacity to decapitate leadership of hostile countries.⁴³¹

In the context of the 2022 full-scale invasion of Ukraine, Putin highlighted his judgement that non-strategic nuclear weapons are Russia's "competitive advantage" over NATO and, more generally, that Russia is better prepared to wage nuclear war than the Alliance.⁴³² He suggested that Europe would be "defenseless" against Russia's non-strategic nuclear attack, and doubted the willingness of the United States to deploy strategic forces in the scenario of a nuclear war in Europe.⁴³³ As a practical demonstration of nuclear sabers-rattling at the regional level, Russia in June 2022 announced the deployment of an undisclosed number of non-strategic nuclear warheads to Belarus, further upgrades to Belarusian delivery vehicles and storage sites, and the training of Belarusian personnel for a nuclear delivery role.⁴³⁴ In an effort to deter further Western military aid to Ukraine, and discourage further involvement in the conflict, Russia has publicized joint tactical nuclear exercises with Belarus to "send a sobering signal to the West."⁴³⁵ Some Russian experts have expressed desire for more blunt Russian nuclear intimidation to discourage Western support to Ukraine.⁴³⁶ In this context, Moscow announced that Russia's nuclear doctrine may be amended by "reflecting the experience gained in the course of the special military operation."⁴³⁷

Russia's increased confidence in its regional nuclear advantage is worrisome because it may lead to Russian miscalculations about NATO's nuclear capabilities and resolve. It is even more unnerving because of the increased incentives for Russia to rely more on its non-strategic nuclear weapons given the depletion of Russia's conventional forces in the war against Ukraine.⁴³⁸ In other words, NATO is facing an adversary that

431 President of Russia, "Meeting with representatives of Russian news agencies and print media" (February 20, 2019). http://en.kremlin.ru/events/president/transcripts/community_meetings/59865.

432 President of Russia, "Plenary session of the St. Petersburg International Economic Forum" (June 16, 2023); "Russia 'prepared' for nuclear war, warns Vladimir Putin," *FT* (March 13, 2024).

433 President of Russia, "Plenary session of the St Petersburg International Economic Forum" (June 7, 2024). <http://en.kremlin.ru/events/president/news/74234>.

434 "Explainer: Russia's plan to deploy nuclear weapons in Belarus," Reuters (June 14, 2023).

435 Russian Foreign Ministry, "Foreign Ministry statement on the Russian Armed Forces' exercises held to practice for the use of non-strategic nuclear weapons" (May 6, 2024), https://mid.ru/en/foreign_policy/news/1948486/; "Russia and Belarus Hold Joint Non-Strategic Nuclear Exercises (Part One)," <https://jamestown.org/program/russia-and-belarus-hold-joint-non-strategic-nuclear-exercises-part-one/> (accessed August 6, 2024); <https://www.themoscowtimes.com/2024/05/24/putin-arrives-in-belarus-to-talk-security-tactical-nuclear-weapons-drills-a85212> (accessed August 6, 2024).

436 Hanna Nottle, "The West Cannot Cure Russia's Nuclear Fever," *War on the Rocks* (July 18, 2023). <https://warontherocks.com/2023/07/the-west-cannot-cure-russias-nuclear-fever/>.

437 "Nuclear doctrine may be amended based on experience of operation in Ukraine — Russian MFA," TASS, (June 27, 2024). <https://tass.com/politics/1809327>. Accessed August 6, 2024.

438 William Alberque, "Russian Military Thought and Doctrine Related to Nonstrategic Nuclear Weapons: Change and Continuity," IISS (January 2024). https://www.iiss.org/globalassets/media-library---content---migration/files/research-papers/2024/01/iiss_russian-military-thought-and-doctrine-related-to-non-strategic-nuclear-weapons_012024.pdf. Accessed August 5, 2024.

is increasingly reliant on its non-strategic nuclear capabilities to intimidate, and in the case of conflict, to achieve its strategic objectives vis-à-vis the Alliance.

Given Russia's distressing predispositions, in order to maintain deterrence in Europe, it will require steps aimed at shaking the Russian leadership confidence in its perceived nuclear strengths. This is becoming more urgent than in previous decades.

In order to effectively maintain deterrence in Europe, it will require going beyond steps taken by NATO over the last decade. This might require strengthening the Alliance's regional nuclear retaliatory capability—for example, by adding new capabilities with certain characteristics that benefit the regional nuclear mix.⁴³⁹ However, for any additions to regional nuclear capabilities to have meaningful deterrence effects, they would have to be significant enough in capability and capacity to alter Russian leaders' deeply-held perceptions about regional nuclear superiority. Adding new systems in limited numbers, such as nuclear-armed cruise missiles deployed on U.S. submarines, might not be sufficient.

This is why regional counterforce could add significant value. A counterforce strategy could further reinforce nuclear deterrence in Europe by creating doubts among Russian leaders about non-strategic nuclear weapons as sources of Russian strength. It could increase the probability of successfully altering the Kremlin's calculus by supplementing nuclear retaliatory capabilities. Reinforced regional counterforce capabilities would also enhance NATO's overall conventional defensive posture, further enhancing deterrence against Russia's conventional aggression.

Extended Deterrence Challenges for the United States in the Indo-Pacific

U.S. strategic nuclear capabilities are the supreme guarantee of the security of the Alliance; critically, NATO's nuclear posture relies on U.S. non-strategic nuclear weapons forward-deployed in Europe.⁴⁴⁰ While addressing nuclear extended deterrence requirements in Europe, the United States has to simultaneously cope with increased extended nuclear deterrence requirements in the Indo-Pacific. The U.S. extended deterrence commitments—namely U.S. nuclear assurance to Japan, South Korea, and Australia—have been challenged by the quantitative and qualitative nuclear buildup by China and North Korea.

China's "breathhtaking" nuclear buildup creates a strategic dilemma for the United States, as for the first time in its history Washington has to address two nuclear near-peers—Russia and China.⁴⁴¹ In this new nuclear landscape, the United States needs to be prepared for scenarios of opportunistic or collaborative aggression that may lead to nuclear conflict with one or both at the same time, or a scenario in which one

439 See, for example: Alan Cummings, "A better case for SLCM-N," *Proceedings* 150, no. 4 (April 2024). <https://www.usni.org/magazines/proceedings/2024/april/better-case-slc-m-n>. Accessed August 5, 2024.

440 NATO 2022 Strategic Concept, para. 29.

441 Brad Roberts, study group chair, *China's Emergence as a Second Nuclear Peer: Implications for U.S. Nuclear Deterrence* (Livermore, CA: Center for Global Security Research, Spring 2023). https://cgshr.llnl.gov/content/assets/docs/CGSR_Two_Peer_230314.pdf. Accessed November 17, 2023.

of the nuclear peers sits out the conflict to improve its relative position against the other two.

As discussed elsewhere in this volume, the two-peer nuclear problem has already raised critical questions about whether the United States should retain strategic counterforce capabilities against both Russia and China. The Europeans will have to react to outcome of the U.S. review of its strategic force sizing.

The two-peer problem could also create new risks for U.S. extended deterrence in Europe at the theater level. With the increasing reliance on U.S. strategic nuclear weapons to maintain a strategic balance with Russia and China, there is a risk of eroding the credibility of U.S. extended deterrence. Such erosion may result from allies' and adversaries' assessments that, in the most stressing scenarios, U.S. allies might be left without a credible U.S. strategic nuclear umbrella.

Greater in-theater means might alleviate these risks and help retain the credibility of U.S. extended nuclear deterrence in Europe. This would imply the regionalization of U.S. extended deterrence, so as to reduce the burden on U.S. strategic capabilities in extended deterrence and strengthens nuclear deterrence at the regional level.

In Europe, the regionalization of U.S. extended deterrence could entail further adaptation of the “hardware” and “software” of NATO nuclear deterrence.⁴⁴² This could also be achieved by adapting and implementing a regional counterforce strategy. By contributing to negating the perceived value of Russia's non-strategic nuclear weapons, such a strategy could convince Russia and assure Allies that NATO has the capabilities and resolve necessary to tackle nuclear threats even when the United States will be increasingly occupied with sustaining effective deterrence at the strategic level.

Technological Innovation

Regional nuclear counterforce is an aspirational strategy. Making it credible would require substantial and long-term investments in offensive, non-nuclear kill-chain capabilities. However, considering the pace of technological change, such an aspirational strategy is possible to implement, due to technological innovation and the adoption of emerging and disruptive technologies (EDTs).⁴⁴³ The practical obstacles to implementing a regional counterforce strategy that existed in the past appear now less insurmountable.

Over the next decade, leveraging the combined interactions of different EDTs—including artificial intelligence (AI), data analytics, AI-enabled cyber operations, cheaper and smarter space assets, autonomous systems, hypersonic weapons, and/or quantum technologies—could create the technological basis for effective regional

442 See more: *Ibid.*, pp. 47-51.

443 On impact of EDTs on strategic nuclear counterforce, see, for example: Keir A. Lieber and Daryl G. Press, “The New Era of Counterforce: Technological Change and the Future of Nuclear Deterrence,” *International Security* 41, no. 4 (Spring 2017), pp. 18-46.

nuclear counterforce capabilities.⁴⁴⁴ For example, AI-enabled decision support tools and ISR could speed up target selection and tracking, which are indispensable for an effective counterforce strategy. The United States and NATO could also leverage counter-space, cyber, electromagnetic spectrum operations, and ISR capabilities to enable non-nuclear or theater nuclear strike capabilities to reach their nuclear targets by destroying, blinding, or avoiding adversary-integrated air and missile defense systems. Different combinations of AI-enabled cyberattacks, kinetic, non-kinetic counter-space attacks, and non-nuclear precision strikes, including hypersonic missiles, could also allow NATO to destroy or disrupt an adversary's military units trained to employ non-strategic nuclear weapons. At the same time, fielding a high-density integrated air and missile defense network, which takes advantage of AI-enabled ISR data and swarms of interceptors, could create doubts that an adversary's non-strategic nuclear attack would succeed.⁴⁴⁵

To successfully influence Russia's calculus, EDT-enabled regional counterforce does not need to be fully proven. Even limited demonstrations that such a strategy could be implemented could be sufficient to create doubts in the minds of Russian leadership about Moscow's regional nuclear advantage.

Strategic stability benefits

A regional counterforce on regional strategic stability could produce a net benefit. The negative strategic stability implications of a regional counterforce should be assessed against the strategic implications of situations in which Russia is increasingly confident in its non-strategic nuclear superiority.

First, the traditional arms race stability argument implies that a regional counterforce will be destabilizing, as it would compel Russia to invest more in achieving a nuclear advantage. However, far more threatening to European stability is a scenario in which Russia's increased confidence remains unaddressed and consequently Russia becomes even more emboldened to leverage its non-strategic nuclear weapons for coercion, blackmail, and brinkmanship or, if necessary, in war, by nuclear employment. This confidence could further increase with the deployment at scale of new dual-capable systems that have been battle tested in war with Ukraine. It can be further reinforced by Russia's investments in new regional nuclear capabilities no matter the Allied approach to a regional nuclear counterforce strategy.

Second, the traditional crisis stability argument suggests that the most destabilizing scenario of the NATO-Russia conflict would be a scenario in which Russia questions the effectiveness of its nuclear capabilities, and is thus incentivized to use its nuclear weapons early to mitigate a hypothetical "use or lose it" risk. Yet, it can be argued that the biggest threat to crisis stability would be a Russia that "fears no loss"

444 See more: Jacek Durkalec, Anna Peczeli, and Brian Radzinsky, "Nuclear decisionmaking, complexity and emerging and disruptive technologies: A comprehensive assessment," *ELN* (February 2022), pp. 24-30, 33.

445 Ibid.

because it is overly confident in its regional nuclear escalation advantage. This may lead to Russia's miscalculation that it has the ability to derive strategic utility from the employment of its nuclear weapons against NATO, at any scale or circumstance, which would far outweigh the costs NATO could impose in response, whether using nuclear or non-nuclear means. A regional counterforce strategy could improve crisis stability by blunting Russia's overconfidence.

Third, a regional counterforce strategy could increase rather than decrease the odds for reinvigorating arms control in Europe. This is because Russia was clearly not interested in arms control in the context of its regional nuclear superiority, perceiving its non-strategic nuclear weapons as its "comparative advantage," not to be traded away. While Russia was unwilling to negotiate when it perceived itself as holding the advantage, it might be more willing to engage in meaningful arms control dialogue if it perceives its advantage is eroding. If Russia's confidence is diminished in leveraging non-strategic nuclear weapons for its own strategic advantage—either in competition, crisis, or conflict—Russia might have a greater incentive to put these weapons on the table in future arms control negotiations.⁴⁴⁶

Fourth, a regional counterforce strategy could have positive effects for stability at the strategic level. In particular, enhanced deterrence effects achieved through regional counterforce could decrease the risk of regional conflict, and consequently the risks that such conflict could escalate to the strategic level.

Finally, serious consideration of adopting a regional nuclear counterforce strategy is needed because of the risk of escalation associated with conventional operations in Europe. In a scenario that involves direct NATO conflict with Russia, the dual-capable nature of many of Russia's delivery systems may lead NATO to find itself in a situation in which it conducts counterforce strikes against Russian non-strategic nuclear forces even without the explicit intent of doing so. Alternatively, NATO may refrain from striking certain Russian dual-capable systems for fear that they may be armed with nuclear warheads and their destruction could lead to unintended escalation.

A deliberate, systematic and thorough approach to counterforce could inform NATO's decisionmaking on whether to use offensive conventional capabilities against certain Russian targets and will better inform NATO's planning and execution of conventional operations. By doing so, such a strategy could contribute to the Alliance's efforts aimed at ensuring nuclear-conventional integration (coherence in NATO parlance), while strengthening nuclear deterrence.

Conclusions

Adopting a regional counterforce strategy is not an easy choice for NATO allies. Doing so would require realistic understanding of the challenges, costs, risks, and tradeoffs of such a strategy. With the lack of applicable historical experience to draw on, any considerations of adopting such a strategy by NATO allies would largely

446 On the relationship between counterforce and arms control, see Paul van Hooft and Davis Ellison, *op. cit.*

have to start from scratch. Finding the required political consensus would be time consuming anyways. Additionally, turning the strategy into a reality would be a costly effort and require significant investments into enabling technologies. The strategy would have to be tested through collective military exercises in order to sufficiently demonstrate to potential adversaries the deterrent capability. Any NATO effort to challenge the added value of Russia's non-strategic nuclear forces would likely be met with an intense information campaign orchestrated by a Russia unwilling to lose its "competitive advantage" against NATO.

Yet the NATO alliance should consider adopting a regional counterforce strategy as its benefits would offset and surpass the hurdles associated with turning it into a reality and mastering the strategic stability risks that such a strategy would create. In the degrading security environment, there are no instant fixes to addressing the threats and dilemmas that the Alliance is facing.

The regional counterforce strategy promises to offer NATO considerable benefits. Holding at least a portion of Russia's non-strategic nuclear weapons at risk could counterbalance Russia's perception of escalation dominance at the regional level. It could also provide additional damage limitation options if deterrence in Europe fails. A regional counterforce strategy in Europe could also contribute to the strengthening of U.S. extended deterrence in Europe at a time when the United States needs to address increasing challenges at the strategic level stemming from the nuclear two-peer challenge and increasing threats from regional nuclear powers such as North Korea. Leveraging NATO's technological prowess, a regional counterforce strategy could also positively contribute to strategic stability. In sum, the sooner NATO allies start vigorously debating regional counterforce, the better.

Alliance Security and the Role of Nuclear Counterforce: A French View

Corentin Brustlein⁴⁴⁷

Over the past few years, a debate on the value and challenges of counterforce targeting in U.S. nuclear strategy in an era of nuclear multipolarity has emerged, as experts started to assess the consequences of the expansion of China's nuclear forces. While nuclear strategy choices such as the deliberation surrounding a targeting strategy may be difficult to apprehend in an exhaustive way, it is striking that the lens initially taken in this important debate fails to capture some critical dimensions of U.S. nuclear policy and strategy. In the Atlantic Council paper that initiated this debate, Keir Lieber and Daryl Press made the argument that U.S. nuclear strategy should reduce its reliance on counterforce targeting for matters of financial sustainability and, to a lesser extent, arms race stability. According to them, keeping a U.S. deterrence strategy that relies on counterforce targeting as China's nuclear arsenal undergoes a massive expansion, especially by vastly increasing the number of hardened targets such as ICBM silos, appeared doomed to lead to an increase in U.S. nuclear force structure requirements that was not only sharp, but unsustainable.⁴⁴⁸

It is beyond the scope of this paper to discuss the authors' assumptions, such as their judgment that the United States currently follows a "counterforce-only strategy," or to review the arguments raised by the authors. However, one cannot fail but notice the fact that the paper discusses U.S. nuclear strategy without ever mentioning the direct connection between the U.S. extended nuclear deterrence commitments and its reliance on nuclear counterforce options. Such a silence is all the more surprising considering that the need to demonstrate the credibility of its extended deterrence policy in Europe and Asia has been and remains a crucial driver of U.S. nuclear strategy since the late 1950s, and particularly of U.S. nuclear counterforce requirements.⁴⁴⁹ Were it not for the need to make credible the possibility of relying on its nuclear arsenal to deter aggression against its allies, the United States might have adopted a deterrence strategy that would have looked radically different, and probably would have translated in vastly different and certainly more modest military requirements.

447 The views presented in this paper are the author's and do not represent the views of the French Ministry of the Armed Forces.

448 Keir A. Lieber and Daryl G. Press, "US Strategy and Force Posture for An Era of Nuclear Tripolarity," Atlantic Council, Issue Brief (April 2023), pp. 3, 6.

449 Earl C. Ravenal, "Counterforce and Alliance: The Ultimate Connection," *International Security* 6, no. 4 (Spring 1982), pp. 26-43; Scott D. Sagan, *Moving Targets: Nuclear Strategy and National Security* (Princeton, N.J., Princeton University Press, 1989), pp. 73-74.

Yet, the specific requirements that derive from U.S. extended deterrence commitments deserve particular attention as Russia pursues a more aggressive revisionist strategy in Europe and as China's strategic rise affects European security, directly and indirectly. In many respects, the renewed U.S. debate on nuclear targeting is thus directly relevant to Alliance security, as any substantial reorientation of U.S. nuclear strategy—whether it affects the targeting strategy or the declaratory policy—might have deep consequences on the overall effectiveness of the Alliance's deterrence strategy. Alliance nuclear policy does not rely only on the U.S. nuclear arsenal and strategy, since it benefits from the existence of three independent centers of decision within the Alliance, each with its own characteristics.⁴⁵⁰ France's nuclear strategy has so far been devoted to the sole protection of the country's vital interests, which have had a European dimension, and has not adopted a strategy that relies primarily on the ability to hold at risk an adversary's nuclear forces. Cold War French decisionmakers rejected such orientations on the grounds that they were not needed and, in any case, unreachable. Yet, the coexistence of complementary U.S., UK, and French national approaches to nuclear deterrence has served the Alliance well throughout the decades, by complicating the calculations of any potential aggressor.

This chapter aims at offering a French—and European—view of the debate on how the requirements of deterrence translate into targeting policies, and how changing the latter may reverberate on the overall credibility of a deterrence strategy. It first discusses how French and U.S. views on nuclear strategy have evolved over time, partly reducing the gap between both approaches to nuclear deterrence, and then offers a French view on the narrow but singular contribution of U.S. nuclear counterforce for the Atlantic Alliance.

Avant propos – What's in a Name?

The current U.S. debate on nuclear counterforce has already had one virtue, which has been to stress how widely the various interpretations of the meaning of “counterforce” may differ, from more narrow understandings to much broader variants.⁴⁵¹ While this definitional ambiguity is somewhat unsurprising, it can be very consequential due to its potentially very large practical implications. A nuclear strategy based on a narrow interpretation of the term, that would strictly focus on targeting adversary nuclear forces, weapons depots, and C3 assets, would very much differ in shape from one that considers as “counterforce” any deterrence strategy that at least partly relies on the ability to hold at risk some targets of military value. While both could be labeled as “counterforce,” those two strategies would translate into different force requirements, would pose different dilemmas to potential adversaries,

450 While the formula has traditionally been associated with the 2016 NATO Warsaw Summit communiqué, the value for the Alliance of having several independent centers of decision has been emphasized early on by multiple Western strategists. See for instance General Paul Stehlin, “Atlantic Policy,” *Foreign Affairs* 42, no. 1 (October 1963), p. 78.

451 See Heather Williams' paper in this volume.

and would thus have very dissimilar effects on the latter's behavior and on escalation dynamics.

For the sake of clarity, this chapter will adopt a narrow understanding of the concept, and use “counterforce” to qualify the component of a nuclear strategy that seeks to hold at risk the adversary's retaliatory capability—most importantly its strategic nuclear forces and associated command and control systems. In a given nuclear strategy, counterforce has generally coexisted with broader “counter-military” targeting requirements, particularly under the framework of flexible response strategy. Applied to strategic nuclear targeting, that approach seeks to hold at risk the full spectrum of elements that would be critical to a given war effort— combat units and supporting assets, command and control systems, and the defense industry as well as associated critical infrastructures.⁴⁵²

1. Existential Rejection: French Views of Nuclear Counterforce During the Cold War

Understanding initial French views about the role and value of counterforce options in nuclear strategies requires going back to debates and decisions from the late 1950s and early 1960s that were foundational for both France, the United States, and the Alliance. These debates brought France to adopt a policy of “proportional deterrence” (dissuasion proportionnelle) or “deterrence of the strong by the weak” (dissuasion du faible au fort), while the rest of the Alliance embraced in 1967 the U.S. policy of flexible response. The contrast between those two policies—which have nonetheless coexisted for decades within the Alliance, thereby complicating the calculations of potential adversaries—has shaped to a large extent the French views on U.S. nuclear counterforce options during the Cold War, which were met with strong skepticism when they were not outright rejected. To put it simply, the primary and most basic rationale behind the French stance on nuclear counterforce was that the latter was seen as fundamentally contradictory with France's strategy and deterrence model. Following from that, nuclear counterforce was considered as irrelevant for national purposes, potentially dangerous for the Alliance, and problematic due to its effects on arms racing.

Different Priorities, Opposite Ways

For years, the option of nuclear counterforce targeting was debated in the U.S. irrespective of the actual capacity of U.S. strategic nuclear forces to conduct meaningful counterforce strikes, which varied over time, depending on changes in both

⁴⁵² This distinction between “counterforce” and “countermilitary” applies to strategic nuclear targeting choices, but makes little sense when considering the employment of tactical nuclear forces, which by definition are meant to aim at military targets on/close to the frontline or in the adversary's immediate rear areas, such as for interdiction. The introduction of longer-range theater nuclear forces during the second half of the Cold War, however, did open larger possibilities in terms of targeting options, as the latter combined the precision required to hold a variety of military targets at risk and the range to strike much in depth of an adversary's territory. See, for instance, the discussion in J. Michael Legge, *Theater Nuclear Weapons and the Strategy of Flexible Response* (Santa Monica, CA: RAND Corporation, April 1983).

U.S. and Soviet nuclear force structures.⁴⁵³ These discussions were central to the process through which U.S. nuclear policy and strategy came to terms with the advent of Soviet intercontinental-range ballistic missiles, leading in 1962 to the adoption of a policy of “flexible response.” Under that policy, the United States would, if deterrence failed, prioritize strikes against military targets while retaining the ability to hold at risk adversary cities, in the hope of inducing restraint from Moscow in the conduct of war. The emergence of counterforce targeting was thus instrumental in making the threat of U.S. nuclear use in defense of allies more credible than it was perceived to be under the policy of massive retaliation. This was pursued in support of two objectives illustrated by Defense Secretary Robert S. McNamara’s 1962 Athens’ speech to the North Atlantic Council: deterring an increasingly capable Soviet Union from attacking U.S. allies, and disincentivizing the acquisition of further independent nuclear forces by reassuring Allies about the strength of U.S. security guarantees⁴⁵⁴.

Seen from Paris, however, the U.S. search for counterforce options was essentially meant to make credible a policy of flexible response whose rejection was a foundational decision for France’s own nuclear policy. Confronted with intense pressure coming from the United States, France, like the UK, had to defend the relevance and legitimacy of its independent European nuclear force that McNamara’s Athens Speech portrayed as “expensive, prone to obsolescence, and lacking credibility as a deterrent.”⁴⁵⁵ Such forces were then considered by U.S. officials not only as ineffective, but as dangerous due to their effects on escalation dynamics and their presumed incentivizing of further nuclear proliferation.

The formative years of France’s nuclear policy saw the short-lived opposition between two distinct visions of what that policy should look like. While both visions supported a French independent nuclear deterrent, they differed regarding how strongly that policy should align with Alliance needs. A majority view followed the Gaullist vision of rejecting U.S. extended deterrence policy as a model because of its presumed lack of credibility and, most importantly, of its political implications for European nations, leaving them in a situation of strategic dependence vis à vis their U.S. protector. A minority view followed a more Atlanticist stance, as reflected by Raymond Aron’s works,⁴⁵⁶ and argued for a greater French involvement in Alliance plans, as well as for a greater alignment on Alliance deterrence and defense requirements—including in terms of participation to collective defense plans.

453 Desmond Ball and Jeffrey Richelson, eds., *Strategic Nuclear Targeting* (Ithaca, NY: Cornell University Press, 1986); Sagan, *Moving Targets*, op. cit.; Richard Smoke, *National Security and the Nuclear Dilemma: An Introduction to the American Experience*, 2nd ed. (New York, NY: Random House, 1987).

454 Robert S. McNamara, “Speech to NATO council, Athens, 5 May 1962,” Philip Bobbitt, Lawrence Freedman and Gregory F. Treverton, eds., *U.S. Nuclear Strategy: A Reader* (Basingstoke: The MacMillan Press, 1989), pp. 205-222.

455 Ibid., p. 212.

456 See, most importantly, Raymond Aron, *The Great Debate. Theories of Nuclear Strategy* (Garden City, NY: Doubleday & Company, 1965).

The policy that emerged from what became known in France as the “great debate”—which was rapidly and decisively settled due to the proximity between the theorists of “proportional deterrence” and De Gaulle’s own views on the deeply political implications of nuclear weapons—rested on several principles that made nuclear counterforce look either irrelevant to France’s approach to nuclear deterrence policy, problematic, or dangerous. Though it rested on a coherent set of doctrinal principles, as a policy it also had material grounds, namely France’s limited financial and technological means—and thus its inability to develop and build a nuclear arsenal that would be somewhat comparable to those of the superpowers. France’s nuclear doctrine was tailored to its financial and technological capabilities while fitting in with De Gaulle’s grand strategic vision, putting independence at the center and thus considering nuclear weapons as a primarily political instrument, not as a military one.

Proportional deterrence was thus crafted as a way to deter a much more capable adversary despite France having limited resources. To achieve that objective, those limited resources were offset by a narrowly defined ambition: to protect only France’s vital interests, as identified by the president of the Republic. Even though those vital interests have been portrayed in multiple occasions since the 1970s as possibly extending beyond France’s borders, Paris has so far refrained from offering explicit security guarantees backed by its nuclear forces.⁴⁵⁷ This rejection of extended deterrence made it possible to adopt what is sometimes qualified by French experts as a “chemically-pure” form of nuclear policy that focuses only on so-called “central” deterrence and has, for that reason, rejected the wide diversity of concepts which spawned over the decades from U.S. strategic community out of the need to deal with the risk of extended deterrence failure—flexible or graduated response, of course, as well as escalation control, damage limitation, limited nuclear war, nuclear warfighting, and protracted nuclear war, among other examples. That policy translated into military requirements that, while they already demanded formidable efforts spanning over decades, were far lower than for the U.S. defense establishment.⁴⁵⁸

As early as the 1960s, strategic targeting was thus one of the domains in which the divergence between the U.S. and French approaches to nuclear strategy was most visible: the United States followed a strategy which, although not purely based on counterforce targeting, relied on the latter to make credible its ability to deter and, if necessary, manage escalation against the Soviet Union despite the vast distance between the U.S. homeland and U.S. allies; by contrast, France early on made the choice of a countervalue targeting policy. Since it was meant to protect the country’s

457 Dominique Mongin, “Histoire de la dimension européenne de la doctrine de dissuasion nucléaire française,” *L’Europe en formation*, no. 395 (2022), pp. 143-157; Bruno Tertrais, “Will Europe Get Its Own Bomb?”, *The Washington Quarterly* 42, no. 2 (Summer 2019), pp. 47-66.

458 See *L’aventure de la bombe. De Gaulle et la dissuasion nucléaire (1958-1969)* (Paris: Institut Charles de Gaulle, 1985); Claude Carlier, “L’effort de défense de la Ve République : La programmation militaire, 1960-1993,” André Corvisier, ed., *Histoire militaire de la France. 4/ De 1940 à nos jours* (Paris: Presses universitaires de France, 1994), pp. 411-447; Marcel Duval and Dominique Mongin, *Histoire des forces nucléaires françaises depuis 1945* (Paris: Presses Universitaires de France, 1993); Jean-Damien Pô, *Les moyens de la puissance. Les activités militaires du CEA (1945-2000)* (Paris: Ellipses – Fondation pour la Recherche Stratégique, 2001).

vital interests against a much stronger adversary, French deterrence strategy rejected the assumption that managing escalation was a prerequisite for deterrence credibility, as it was actually quite the contrary: signalling an adversary about one's readiness to manage escalation and to respond in a graduated fashion to an attack meant implicitly accepting the possibility of seeing those vital interests compromised. But as General Gallois put it, "France [had] nothing to cede that would not be herself," a statement that very much reflects French post-World War II thinking.⁴⁵⁹

French strategic targeting policy initially focused on the ability of France's force de frappe to destroy adversary cities, and to cause damage that would be both comparable to what France would lose as well as disproportionately higher than what the adversary could hope to gain from his aggression. But those two criteria could have taken different practical forms. One way to operationalize this strategy was to use a demographic criterion to measure how much destruction would be enough to deter the Soviet Union. As President Giscard d'Estaing declared a few years after leaving office, "French nuclear forces have been calculated to permit reaching a population of the adversary of the same order as that of our own country. If France were destroyed, our adversary would lose the equivalent of France."⁴⁶⁰ The demographic criterion was not, however, the only one guiding France's countervalue targeting policy, as was hinted at as early as the 1960s, and as became explicit in the late 1970s and early 1980s: the increasing Soviet interest for and efforts in passive and active civil defense programs led France to include "the infrastructure of Soviet administrative control as well as industrial and economic assets,"⁴⁶¹ thus laying the foundations for the post-Cold War changes in its targeting policy (see below).

Furthermore, although France's strategic deterrence policy did reject counterforce targeting as an option, its plans did not wholly exclude countermilitary targeting per se. In parallel with the development of its strategic triad, which remained associated with a countervalue targeting policy throughout the Cold War, France developed and fielded tactical nuclear weapons (TNW) of two types, the Pluton short-range ballistic missile and the AN-52 gravity bomb. After some doctrinal hesitancy in the early-to-mid 1970s, French officials started describing the role of these two weapons systems. Their purpose was to ensure that an adversary would be unable to identify a deterrence gap between the conventional battle that the French First Army was destined to wage—and expected to lose—against advancing Warsaw Pact units, and

459 As quoted in Bruno Tertrais, "'Destruction assurée': The Origins and Development of French Nuclear Strategy, 1945-1981," Henry D. Sokolski, ed., *Getting MAD: Nuclear Mutual Assured Destruction, Its Origins and Practice* (Carlisle, PA: Strategic Studies Institute, 2004), p. 66.

460 Interview of President Giscard d'Estaing, *Le Figaro* (December 12, 1983), as translated in *ibid.*, p. 82.

461 David S. Yost, "French Nuclear Targeting," Desmond Ball and Jeffrey Richelson, eds., *Strategic Nuclear Targeting* (Ithaca, NY: Cornell University Press, 1986), p. 133.

the decision to resort to strategic weapons.⁴⁶² The deployment of French TNWs near the Franco-German border would give Paris the option of sending a final warning to an aggressor that would threaten the nation's vital interests. While different in nature from the defensive battle waged by conventional forces, such a final warning strike would still target the major Warsaw Pact advancing formations.⁴⁶³ The two distinct but complementary logics that applied to France's strategic and tactical nuclear forces thus provided the backstop of what Paris could have mustered in terms of limited conventional defenses. The idea of mutual support between nuclear deterrence and conventional defense, later mentioned by President Macron in his 2020 speech, thus found its origins in France's efforts during the 1960s and 1970s to maximize the deterrent effects of its posture.⁴⁶⁴

In sum, the development of nuclear counterforce options was seeking to make credible a doctrine of flexible response that France had opposed, to support an extended deterrence policy whose goals included undermining the case for independent nuclear forces, and came with qualitative and quantitative requirements that were simply out of reach for France. In essence, embracing nuclear counterforce then would have meant embracing the very model France had rejected as it established the foundations of its nuclear policy.

Counterforce and Strategic Stability

Rejecting counterforce as a legitimate option was not only existential to France due to its incompatibility with its doctrinal principles, but also due to what were perceived as its dangerous consequences for France and Europe.

Far from being grounded solely in principles, French concerns with the U.S. quest for nuclear counterforce options also reflected pragmatism surrounding the ripple effects those options could have on U.S. adversaries, particularly the Soviet Union. Until the ABM treaty was signed, a strategy relying on counterforce options could seek to rely on the potential combination of both offensive capabilities—particularly hard target kill capabilities such as MIRVed ICBMs—and defenses, whether passive or active. France stated early on that it would not—nor could not—seek parity with the USSR and the United States, but would subscribe to a force-sizing principle that later became known as strict sufficiency (*stricte suffisance*). This led France to embrace, albeit not explicitly, the philosophy of “(Mutually) Assured Destruction,” which, among all the nuclear concepts spawned by the U.S. strategic community since the 1960s,

462 Raymond Barre, “Discours au camp de Mailly, 1977,” Dominique David, ed., *La politique de défense de la France. Texte et documents* (Paris, Fondation pour les Etudes de Défense Nationale, 1989), pp. 249-250; Tertrais, “Destruction assurée,” op. cit., pp. 77-81.

463 Louis-Marie Baille, “L'épisode nucléaire tactique français, 1957-1996,” Nicolas Haupaïs, ed., *La France et l'arme nucléaire* (Paris, CNRS Editions, 2019), p. 75.

464 See President Macron's speech, “Discours du Président Emmanuel Macron sur la stratégie de défense et de dissuasion devant les stagiaires de la 27e promotion de l'Ecole de Guerre,” (February 7, 2020). <https://www.elysee.fr/emmanuel-macron/2020/02/07/discours-du-president-emmanuel-macron-sur-la-strategie-de-defense-et-de-dissuasion-devant-les-stagiaires-de-la-27eme-promotion-de-lecole-de-guerre>. Accessed July 5, 2024.

was among the few that was seen as compatible with the French approach.⁴⁶⁵ On the contrary, the U.S. interest in nuclear counterforce options, which persisted alongside the acknowledgment of a situation of assured destruction, was criticized by many in France as the embodiment of irrational and pointless arms racing, since it was seen as pursuing the vain quest for “nuclear superiority.” As for any medium nuclear power relying on a comparatively limited number of ballistic missiles, an unrestrained race between strategic offense and defense could have very direct consequences for French nuclear forces if it de facto legitimized large-scale ballistic missile defense and led potential adversaries to massively invest in, and deploy, such capabilities to protect their territories. For France, as for all nuclear weapons possessors, reaping the strategic benefits of the nuclear revolution required ensuring the operational credibility of its nuclear forces despite the technological developments that might have threatened mission success and that the pursuit of counterforce options seemed to incentivize.⁴⁶⁶ Even after the ABM treaty went into force, France’s concerns associated with BMD remained acute, as reflected by Paris’ response to the Strategic Defense Initiative.⁴⁶⁷ However, starting in the 1980s, French rejection of BMD was less and less grounded in concerns regarding the credibility of France’s nuclear forces, thanks to their growing level of sophistication—including advances in reentry vehicles, penetration aids, or supersonic cruise missiles.

Finally, the French rejection of U.S. counterforce options was also rooted in French skepticism surrounding the concrete implications of flexible response as a strategy for the Alliance. Seen from the United States, flexible response backed by counterforce options made the U.S. commitment to Europe more credible. This was accomplished by offering Washington the ability to respond to a Warsaw Pact aggression whatever the shape and scale of the attack (through a deliberately limited nuclear use at the battlefield or theater level that would seek to blunt the attacking forces while hopefully disincentivizing nuclear escalation by the Soviet Union). However, seen from France, as well as from other parts of Western Europe, being able to manage nuclear escalation was seen less as a way to ensure the U.S. commitment to European security than as increasing the risk of strategic decoupling between the United States and Europe.⁴⁶⁸ An associated European fear equally present among French observers was that it would make Europe ripe for limited nuclear use—perhaps even for nuclear war—while preserving the U.S. homeland.⁴⁶⁹

465 Tertrais, “Destruction assurée,” op. cit.

466 On the limits of the “nuclear revolution” argument, see both Brendan Rittenhouse Green, *The Revolution that Failed: Nuclear Competition, Arms Control, and the Cold War* (Cambridge: Cambridge University Press, 2020), Chapter 2; Keir Lieber and Daryl G. Press, *The Myth of the Nuclear Revolution: Power Politics in the Atomic Age* (Ithaca, NY: Cornell University Press, 2020).

467 Jean Klein, “La France et la défense antimissile,” *Politique étrangère* (April 2001), pp. 827-846.

468 That argument is also visible in Ravenal, “Counterforce and Alliance: The Ultimate Connection,” op. cit., p. 36.

469 See for instance Charles Ailleret, “Opinion sur la théorie de la “flexible response,” *Revue de la défense nationale* (août-septembre 1964), pp. 323-340; Lucien Poirier, *Des stratégies nucléaires* (Paris: Complexe, 1988, 1st ed. 1977), pp. 252-267.

2. Transitioning to the Post-Cold War Era: Growing Convergence and Persisting Divergences Between the United States and France's Approaches to Deterrence

While France's initial nuclear policy followed a path different from those chosen by the United States, the UK, and the Alliance, several policy and capability changes that occurred throughout the following decades have tended to reduce the amount of divergence between both approaches, allowing for the U.S. pursuit of nuclear counterforce options to be seen as a useful complement to the French way of deterrence, although it was still not within French practices.

A first change, spanning over decades between the 1970s and the 2010s, has seen the growing mutual recognition between France and its allies of the value of their respective ways to contribute to Alliance security, allowing, after the 2014 annexation of Crimea by Russia, for a greater French involvement in the Alliance deterrence and defense posture as well as a greater engagement with Allies on nuclear policy matters. Although not by itself driven by, or related to views on nuclear counterforce, it provided a foundation that allows for a greater French recognition of the specific requirements of the Alliance's nuclear policy and of extended deterrence for U.S. force structure and policy, different as they may be from the requirements associated with the French nuclear policy.

The first crucial step in that direction happened with the Declaration on Atlantic Relations issued in 1974 by the North Atlantic Council, now known as the "Ottawa Declaration," which acknowledged that the nuclear forces of the UK and France were "capable of playing a deterrent role of their own contributing to the overall strengthening of the deterrence of the Alliance."⁴⁷⁰ The explicit recognition of the potential contribution of France's nuclear deterrent, and thus of its legitimacy in the eyes of Allies, even as it remained out of the Nuclear Planning Group, helped lay a foundation upon which, decades later, further progress was possible in response to Russia's revisionist strategy. Over time, the formula has become mainstream and found its way in almost all NATO public statements on nuclear policy, while at the same time evolving to assert even more clearly the permanent character of the contribution of the independent nuclear forces of the UK and France: after being considered in 1974 as being capable of playing a deterrent role of their own, both forces were publicly acknowledged as having a deterrent role of their own starting in the 1991 Strategic Concept.⁴⁷¹

The recognition by NATO allies of the valuable contribution of France's nuclear deterrence to the Alliance was made even more explicit after the annexation of Crimea by Russia. The 2016 Warsaw Summit communiqué not only reasserted the Ottawa Declaration but went further by underlining that having two additional centers of nuclear decisionmaking in London and Paris contributed to deterrence by

470 "Declaration on Atlantic Relations," issued by the North Atlantic Council (June 19, 1974).

471 "The Alliance's New Strategic Concept (1991)" agreed by the heads of state and government participating in the Meeting of the North Atlantic Council (November 7, 1991). https://www.nato.int/cps/en/natohq/official_texts_23847.htm. Accessed July 5, 2024.

“complicating the calculations of potential adversaries.”⁴⁷² In parallel, since Russia’s annexation of Crimea and its efforts to destabilize Eastern Donbass, France has demonstrated, through concrete steps and at an increasing scale, its commitment to NATO’s deterrence and defense posture, expanding on the foundation laid by the French Air Force’s participation to NATO’s Baltic Air Policing mission since 2004. Following the Warsaw Summit, the decision was taken to contribute to the Alliance’s enhanced Forward Presence deployments, and thus to participate on a permanent basis, and as a nuclear-weapon state, to the Alliance’s trip-wire strategy. Since then, particularly since the beginning of Russia’s war of aggression against Ukraine, the French contribution to both Air Policing and forward presence missions has expanded. Thus, while remaining outside of the NPG, France has taken a more active role in strengthening the Alliance’s deterrence and defense policy, embodying its willingness to take into account the specific needs of the Alliance confronted with a revisionist, nuclear-armed Russia.

The end of the Cold War also led both Paris and Washington to adjust elements of their nuclear policies in ways that made them seem, at least partly, less dissimilar than what they used to be at their inception. For France, those changes were primarily the result of the modernization of its nuclear forces, which opened the way for specific policy changes. While France dismantled both its “tactical” nuclear forces (which, starting in the late 1970s, had been labeled as “prestrategic” instead of “tactical”) and its strategic ground-based ballistic missiles, its strategic air leg started to transition from gravity bombs to the ASMP (air-sol moyenne portée) standoff cruise missiles in 1986, while its M-45 and, later on, M-51 SLBMs, were incrementally updated every decade. The net result of these changes has been to provide the Strategic Air Forces, the Strategic Submarine Force, and the Naval Nuclear Force⁴⁷³ with substantially more flexibility, thanks to, *inter alia*, either increased precision, better ability to penetrate defenses, or greater payload capacity. Combined with the investments in space-based imagery and military intelligence collection and processing capabilities revealed as critical through the 1991 Gulf War, these efforts made it possible for a change in France’s nuclear targeting policy, moving away from its longstanding policy relying solely on counter-city targeting, while remaining committed to a philosophy of deterrence through the threat of “unacceptable damage.”

In practical terms, the increased flexibility offered by modernized French nuclear forces supported by enablers such as intelligence capabilities made it possible to envision ways of inflicting “unacceptable damage” different from what was feasible

472 “Warsaw Summit Communiqué,” issued by the heads of state and government participating in the meeting of the North Atlantic Council in Warsaw (July 9, 2016).

473 Force aérienne nucléaire (FANu), which can be activated upon decision by the president and operate from France’s aircraft carrier.

during the Cold War, which left no other option than a counter-city policy.⁴⁷⁴ The new policy was revealed by President Jacques Chirac in the two speeches on nuclear deterrence he delivered in 2001 and 2006, and later confirmed by all his successors: since then, the threat of unacceptable damage to an adversary has relied on the ability to hold at risk its “centers of power” which have been said to be “political, economic, or military” in nature.⁴⁷⁵

A crucial factor that made it possible for France to get rid of its TNWs without undermining the coherence and effectiveness of its deterrence posture was the increasing flexibility offered by its modernized strategic forces, particularly the possibility of the Strategic Air Force and the Naval Nuclear Air Force of relying on a nuclear stand-off missile like the ASMP.⁴⁷⁶ The latter combined a standoff range, increased precision, and a speed that offered it a strengthened ability to penetrate defended airspaces, one that had been lacking to France’s initial air-delivered nuclear capabilities. Thanks to those characteristics, the “final warning” mission could evolve and provide more diverse options to the French president, less constrained than what TNWs would have allowed.⁴⁷⁷ As a consequence, while post-Cold War France only kept strategic weapons in its arsenal, it maintained the “final warning” mission, and with it the requirement for French nuclear forces to hold at risk military targets. The 1994 White Paper thus stated that:

French nuclear forces must be permanently capable of fulfilling two functions:

- deliver a strike that would cause unacceptable damage, and which could be executed as a second strike;
- deliver a limited strike **against military targets** as a final warning.⁴⁷⁸

474 Bruno Tertrais, “‘Destruction assurée’: The Origins and Development of French Nuclear Strategy, 1945-1981,” Henry D. Sokolski, ed., *Getting MAD: Nuclear Mutual Assured Destruction, Its Origins and Practice* (Carlisle, PA: Strategic Studies Institute, 2004), especially pp. 81-88.

475 “Déclaration de M. Jacques Chirac, Président de la République, sur la politique de défense de la France, notamment la dissuasion nucléaire,” *Brest* (January 16, 2006), <https://www.elysee.fr/jacques-chirac/2006/01/19/declaration-de-m-jacques-chirac-president-de-la-republique-sur-la-politique-de-defense-de-la-france-notamment-la-dissuasion-nucleaire-a-brest-le-19-janvier-2006> (accessed July 5, 2024); “Discours de M. Jacques Chirac, Président de la République, sur la politique de défense de la France, la stratégie militaire, le désarmement nucléaire, la défense européenne, la réforme du système de défense, les interventions militaires extérieures de la France et la force de dissuasion française,” Paris (June 8, 2001), <https://www.vie-publique.fr/discours/172860-discours-de-m-jacques-chirac-president-de-la-republique-sur-la-politi> (accessed July 5, 2024); David S. Yost, “France’s Nuclear Deterrence Strategy: Concepts and Operational Implementation,” Sokolski, ed., *Getting MAD*, op. cit., pp. 197-237.

476 The ASMP was later replaced in the late 2000s by the ASMPA (Air-Sol Moyenne Portée – Amélioré - “air-to-ground, medium-range, upgraded”).

477 Victor Bréhat, “Aéronautique – La pénétration nucléaire préstratégique,” *Défense nationale* (December 1987), pp. 185-187; Jean Guisnel and Bruno Tertrais, *Le Président et la Bombe: Jupiter à l’Elysée* (Paris : Odile Jacob, 2016), pp. 219-220.

478 Emphasis added. *Livre Blanc sur la Défense* (Paris: La documentation française, 1994), p. 58.

As it transitioned to its second generation of capabilities, the French nuclear deterrent also grew more secure and thus more credible than during its first two decades. As a consequence, the concerns associated with the indirect negative effects of U.S. development of nuclear counterforce options have diminished over time. The post-Cold War context drew the United States and Russia to drastically reduce their nuclear arsenals through both unilateral cuts and bilateral arms control. Nationwide ballistic missile defenses, even after the U.S. withdrawal of the ABM treaty, remained limited in scope and thus far from capable of undermining mutual vulnerability and of fueling the kind of offense-defense arms race that could have increased the active defense challenge to France's nuclear deterrent. This led President Chirac to recognize, in 2006, that a limited BMD capability could supplement nuclear deterrence by diminishing France's vulnerabilities, and two years later President Sarkozy to acknowledge the role of BMDs to preserve French freedom of action as a complement to nuclear deterrence.⁴⁷⁹ Having said that, a few days after the inauguration of his second term, President Trump signed an executive order requesting the establishment of a "Golden Dome for America." Though little is known at this stage about the timeline and concrete steps envisioned by his administration, the high priority given to homeland missile defense and the level of ambition displayed in the executive order⁴⁸⁰ could bring a substantial change in U.S. missile defense policy, one that may revive the concerns of both U.S. allies and competitors.

3. The Alliance and U.S. Nuclear Counterforce After the Cold War: Supply-Side and Demand-Side Problems

For more than 20 years, from an Alliance standpoint, the value of U.S. nuclear counterforce capabilities became both less discussed and less salient. This trend was both a demand-side and a supply-side issue, which reflected at the same time the changed security environment and shifting nuclear debates among the Allies, as well as the evolving U.S. military power and nuclear strategy.

On the demand side, the dramatic changes in the security environment, and particularly the evolving relationship and strategic balance with Moscow, put an increasing distance between the Alliance and nuclear strategy issues. As a consequence of the new political landscape in Europe, of the unprecedented emphasis by the Alliance on crisis management operations starting in the mid-1990s, and of the overall weakening of the Russian military until the mid-2000s, the debates on nuclear policy issues within the Alliance both lost their centrality and drastically changed in nature as priorities and threat perceptions evolved. Compared with the 1980s, during which Allies had in-depth discussions about theater nuclear force modernization, declaratory policy, or escalation management, the intra-Alliance

479 See "Déclaration de M. Jacques Chirac, Président de la République, sur la politique de défense de la France, notamment la dissuasion nucléaire," *op. cit.*

480 "The Iron Dome for America," Washington, DC (January 27, 2025). <https://www.whitehouse.gov/presidential-actions/2025/01/the-iron-dome-for-america/>. Accessed April 4, 2025.

debates on nuclear policy pivoted in the 1990s and 2000s to more political or peripheral topics such as nonproliferation, arms control, or disarmament.⁴⁸¹ That trend seems to have peaked under the first half of the Obama administration. Although the 1999 Strategic Concept remained explicit on the role of nuclear weapons in NATO strategy,⁴⁸² Allies ended up become less and less able to agree on a clear rationale for remaining a nuclear alliance or for relying on nuclear sharing arrangements after President Obama made his 2009 Prague Speech.

Simply put, not enough Allies felt exposed to the type of direct threats that could challenge U.S. extended nuclear deterrence policy and confront themselves to difficult escalation-management dilemmas. The appetite and bandwidth for nuclear strategy discussions among allies were, perhaps unsurprisingly, nowhere to be found as the very need for nuclear weapons was to many either unclear or debatable. In that context, it is not surprising that the only Alliance debates on nuclear capabilities and extended deterrence requirements that became public during the run-up to the U.S. 2010 NPR and to the 2010 Strategic Concept focused not on nuclear counterforce, but on U.S. forward-based “nonstrategic” nuclear weapons, with several NATO allies, including three out of five DCA countries (Belgium, Germany, and the Netherlands) openly calling for withdrawing U.S. B61s from Europe in a letter to the Secretary General of the Alliance.⁴⁸³ No such decision was ultimately taken by NATO allies, and the U.S. administration stayed on track on its decision to replace the existing forward-based variants of the B61 gravity bomb with a new consolidated variant, the B61-12—a first step that would later be followed by the decisions of DCA allies to procure F-35As to remain capable of conducting the nuclear missions. However, the lack of consensus within the Alliance on the rationale behind its existing nuclear posture was clear, and remained so until at least 2014, with the first Deterrence and Defense Posture Review (DDPR), published in 2012, failing to convincingly state the role of nuclear weapons in Alliance strategy.⁴⁸⁴

Supply-side issues—that is, shifting U.S. approaches and capabilities—also contributed to the reduced visibility of nuclear counterforce options within Alliance discussions. While both Russia and the United States took bilateral and unilateral steps to drastically reduce both sides strategic and nonstrategic nuclear force levels as well as their postures, the strategic balance with Russia improved as the U.S. fielded their last generation of strategic nuclear platforms and means of delivery (B-2

481 Corentin Brustlein, “NATO’s Nuclear Posture and Arms Control,” John Andreas Olsen, ed., *Future NATO: Adapting to New Realities*, RUSI, Whitehall Papers 95, no. 1 (2020), pp. 122-123; Alexander Mattelaer, “A Nuclear Alliance,” John Andreas Olsen, ed., *Routledge Handbook of NATO* (Abingdon: Routledge, 2024), pp. 93-105.

482 It stated in his §46 that “[n]uclear weapons make a unique contribution in rendering the risks of aggression against the Alliance incalculable and unacceptable. Thus, they remain essential to preserve peace.” https://www.nato.int/cps/en/natohq/official_texts_27433.htm. Accessed July 5, 2024.

483 Kent Harris, “NATO allies want U.S. nuclear weapons out of Europe,” *Stars and Stripes* (March 3, 2010). <https://www.stripes.com/migration/nato-allies-want-u-s-nuclear-weapons-out-of-europe-1.99637>. Accessed July 5, 2024.

484 *Deterrence and Defence Posture Review* (May 2022). https://www.nato.int/cps/en/natohq/official_texts_87597.htm. Accessed July 5, 2024.

and Ohio-class SSBNs with Trident IID5 SLBMs, among others). Most importantly, the strategic balance seemed to improve thanks to the advent of what was then considered a “revolution in military affairs” based on IT-enabled progress in crucial capability areas (ISR, precision guidance, command and control, for example) revealed through the conduct of operation Desert Storm. This initially seemed to give U.S. military power a crucial, one-sided advantage in conventional warfighting. As a result, the U.S. edge in conventional warfighting started to be considered not only as a potential substitute to nuclear weapons, but as a more credible deterrent.⁴⁸⁵

As a consequence, the very conception of counterforce operations drastically evolved at the end of the Cold War. Even though almost all U.S. administrations between the end of the Cold War and the 2014 Russian annexation of Crimea stated the ambition of reducing the role of nuclear weapons in U.S. strategy, the reasons behind that ambition differed among its supporters.⁴⁸⁶ While some of the advocates for a reduced role of nuclear weapons in U.S. strategy were driven by moral and diplomatic considerations, reducing U.S. reliance on nuclear weapons was also meant to maximize U.S. strategic and operational leverage vis à vis potential WMD-armed adversaries. Indeed, while the benefits of a growing reliance on conventional capabilities for U.S. deterrence and escalation management strategies had been frequently asserted since the advent of the flexible response strategy, their appeal, particularly in the form of long-range precision strike, strengthened after it became clear that the United States enjoyed a clear advantage in those areas over Russia and China—one that would translate into an even more comfortable degree of conventional superiority vis à vis WMD-armed regional adversaries.⁴⁸⁷ One of the reasons why nuclear counterforce was less visible and less discussed after the end of the Cold War thus seems to reflect the growing hopes regarding conventional counterforce options, including as a way to allow for deeper reductions in nuclear arsenals.⁴⁸⁸

Although it had become less salient and less obvious, the value of nuclear counterforce to the benefit of the Alliance had not disappeared. Changes in the security environment since 2014, and even more change since the beginning of Russia’s war of aggression against Ukraine, serve as a reminder of the narrow but persistent value of nuclear counterforce to the security of the Alliance.

485 See for instance William Perry, “Desert Storm and Deterrence,” *Foreign Affairs* 70, no. 4 (Fall 1991), pp. 66-82; Seth Cropsey, “The Only Credible Deterrent,” *Foreign Affairs* 73, no. 2 (March-April 1994), pp. 14-20; Michael J. Mazarr, *The Revolution in Military Affairs: A Framework for Defense Planning* (Carlisle Barracks, PA: Strategic Studies Institute, 1994), pp. 26-27.

486 On reduced reliance on nuclear weapons as an element of continuity between the three first Nuclear Posture Reviews, see Brad Roberts, *The Case for U.S. Nuclear Weapons in the 21st Century* (Stanford, CA: Stanford Security Studies, 2015), p. 40.

487 Corentin Brustlein, *Conventionalizing Deterrence? U.S. Prompt Strike Programs and Their Limits*, Ifri, Proliferation Papers (January 2015), pp. 13-23.

488 See for instance Dennis M. Gormley, *The Path to Deep Nuclear Reductions. Dealing with American Conventional Superiority*, Ifri, Proliferation Papers (Fall 2009).

4. U.S. Nuclear Counterforce and the Current and Future Equation of Deterrence in the Alliance

The threat landscape we face today is incomparable with what we have known for 30 years. The margin of conventional superiority temporarily enjoyed by the West, and particularly by the United States, over its potential adversaries has been reduced due to the combined effects of multiple factors—particularly the decreasing focus on, and investments in, high-intensity warfare due to the then priorities of the day such as peacekeeping and irregular warfare. In this context, the specific role of nuclear counterforce to Alliance security has become more salient.

Complementary nuclear logics within the Alliance

The chief reason that makes maintaining nuclear counterforce options valuable for the Alliance has to do with the ability of a distant protector to weigh in on adversary decisionmaking in an extended deterrence setting, especially when confronting risk-prone adversaries. As the balance of force has become less favorable than at any given time since the end of the Cold War, the strategies of our potential adversaries have changed, reflecting not only an increased capacity to act but also an increased disinhibition, which translates into both a greater tolerance to costs and a greater propensity to take risks.⁴⁸⁹ The clearest example of that trend is Russia's strategy to challenge U.S. and European interests, in Europe as well as outside of the continent, in an increasingly direct manner. For 15 years, Russia used to rely essentially on hybrid warfare to pursue its revisionist goals, combined with episodes of conventional war limited in scope and/or duration, whether in Georgia, Ukraine, or Syria. Now, as made clear since the beginning of the war in Ukraine, Russia has been willing to pay the heavy human, economic, and diplomatic costs associated with the large-scale aggression of Ukraine, thus demonstrating that Moscow's perceived stakes in changing the status quo in Europe were sufficiently high to endure severe costs. To be sure, the level of Russian disinhibition vis à vis the West is far from total, as Moscow has so far refrained from directly attacking U.S. and European interests despite the latter's growing material support to Ukraine. However, its demonstrated willingness to change the status quo in Europe under the shadow of its nuclear weapons forces us to anticipate medium-to-long-term scenarios of a direct Russian aggression against NATO allies.

To pursue its goal of credibly deterring and defending against all potential forms of aggression, the Alliance has to be prepared to confront a Russian strategy that could rely on the possibility of limited nuclear employment. The Alliance needs to rely on the nuclear doctrines and postures of the P3, as well as on the Alliance's nuclear sharing arrangements, in a way that shields its member states from the peacetime and crisis time effects of nuclear intimidation threats. By strengthening U.S. confidence in its ability to manage escalation in case of adversary first use of nuclear weapons,

489 *Revue Nationale Stratégique 2022* (Paris: Secrétariat Général de la Défense et de la Sécurité Nationale, 2022), pp. 9-13.

the possession of credible counterforce options, including as a damage-limitation capability, serves both extended deterrence and Allies' assurance. Reducing the effectiveness of nuclear intimidation threats aiming at non-nuclear European allies thus rests on material grounds, such as the possession of nuclear forces flexible, diverse, and credible enough to pose acute dilemmas to an adversary pursuing a coercive escalation control strategy. However, it also requires shoring up the nuclear culture of nonnuclear allies and their level of confidence in the value of being part of a nuclear alliance – as reminded by then-French Minister of Europe and Foreign Affairs Jean-Yves Le Drian, who said on February 24, 2022 that “Putin must understand that NATO is a nuclear alliance.”

The challenges grow even more complex for crisis and wartime. After decades without having to deal with similar dilemmas, the Alliance now faces a threat environment that re-emphasizes the need to think about the risks and consequences of a failure of Alliance deterrence. Here again, allies' protection could benefit from seeing two complementary logics—the extended deterrence offered by the United States and the UK to other NATO allies, and the ambiguity surrounding France's vital interests and their European dimension—work together to complicate the calculations of an adversary regarding how nuclear Allies could try to restore deterrence. According to France's nuclear deterrence strategy, restoring deterrence could involve resorting to a nuclear “warning shot,” which would signal to an adversary that the nature of the conflict is about to change as he persists in his aggression against France's vital interests. For the United States and the Alliance as a whole, a credible capacity to restore deterrence should an ally be attacked requires an ability to respond, possibly with nuclear weapons, and to conduct conventional operations while managing escalation with a major nuclear competitor possessing a survivable second-strike capability.⁴⁹⁰

Absent a counterforce component in U.S. nuclear strategy, or if the U.S. political commitment to extended deterrence appears to falter, competitors may mistakenly believe they have a credible strategy to exert coercive pressure through the limited use of nuclear weapons, control escalation, and aim for the decoupling of U.S. and European interests by gradually increasing the pain inflicted to U.S. allies. Maintaining and modernizing nuclear counterforce options, including under the form of damage-limitation options, can increase the spectrum of response options for the United States and thus help complicate adversary calculations and dispel any misplaced adversary confidence in his strategy to control escalation against NATO. In that sense, it further complicates the decisionmaking of a potential adversary who remains uncertain regarding any aspect of an Alliance response to a major aggression—its potential triggers, nature, size, and targets, among other examples.

490 Greg Weaver and Amy Woolf, *Requirements for Nuclear Deterrence and Arms Control in a Two-Nuclear-Peer Environment* (Washington, DC: Atlantic Council, 2024).

The persistent limits of conventional counterforce

Conventional weapon systems remain deeply incapable by themselves of making the counterforce component of an extended deterrence strategy credible. Nonnuclear effects, whether kinetic or nonkinetic, still face intrinsic limitations that make them incapable of producing physical and psychological effects comparable to those of nuclear weapons. The lethality of nuclear weapons remains unrivaled. Without a doubt, conventional capabilities have seen tremendous progress in terms of range, precision, speed, or unit cost. However, despite the relative democratization of conventional long-range strike capabilities and their large-scale visible use during the past two years in Ukraine or in the Middle East, the concrete effects of those capabilities have been limited to the tactical level, sometimes up to the operational level.⁴⁹¹ While they certainly factor in the peacetime calculations of adversary decisionmakers, their wartime use has remained indecisive, incapable of dramatically altering those calculations. They have so far offered ways for each party to shape the battlefield or to impose costs by damaging or destroying unhardened targets such as unprotected aircraft, ammunition stockpiles, civilian facilities, and radars, among other examples. However, their effectiveness has widely varied over time, depending on factors such as the available intelligence, ground-based surface-to-air defenses, or control over the electromagnetic spectrum.

Beyond the potential of specific nonnuclear assets, the margin of conventional superiority enjoyed by the United States over its potential adversaries, particularly over China, is widely considered to have been eroding since the early 2000s. This trend has first and foremost affected air power, as the latter had been the U.S. and Western primary instrument of unilateral military advantage after the Cold War, which incentivized Russia, China, and other countries to invest in capabilities aimed at countering or offsetting Western air superiority (advanced radars, electronic warfare, air defense, long range precision strike, among other examples).⁴⁹² Beyond air power, the diffusion of precision-strike architectures and anti-access/area-denial (A2/AD) capabilities not only benefited major competitors, but regional adversaries and some of their proxies— as their widespread use by Hezbollah, Hamas, and the Houthis made clear.⁴⁹³ More generally, this eroding margin of superiority reflects the facts that (1) the overall economic and industrial balance has changed; (2) Western military expenditure after the Cold War was both drastically reduced and reoriented toward investment priorities that differed from the requirements of major war (such as stability, counter-piracy, counter-insurgency, and counter-terrorism operations);

491 Franz-Stefan Gady and Michael Kofman, "Making Attrition Work: A Viable Theory of Victory for Ukraine," *Survival: Global Politics and Strategy* 66, no. 1 (February-March 2024), pp. 7-24.

492 Corentin Brustlein, Etienne de Durand and Elie Tenenbaum, *La fin de la suprématie aérienne. Menaces et contre-stratégies à l'horizon 2030* (Paris: La Documentation française, 2014).

493 John D. Maurer, "The Future of Precision-Strike Warfare—Strategic Dynamics of Mature Military Revolutions," *Naval War College Review* 76, no. 2 (Spring 2023).

(3) revisionist powers have focused their investments on niche capabilities and capitalized on the defensive advantages of operating close to their homelands.⁴⁹⁴

Since that concerning trend has been identified for at least a decade now, and both the United States and its allies have increasingly invested to preserve or recreate areas of global or partial operational advantage in the nonnuclear sphere—as the U.S.’s so-called “Third Offset strategy” made clear under the Obama administration. Yet, while the value of conventional counterforce capabilities against nuclear forces may seem substantial against regional adversaries with relatively small nuclear arsenals, and against whom the U.S. conventional advantage may still be large enough, its ability to play a major role against the two principal nuclear competitors appears heavily constrained due to the extreme requirements of such a mission, whether in terms of types of capabilities (penetrating ISR, range, speed, and ability to hold at risk hardened targets, among other examples), of numbers of available and usable capabilities, or in terms of escalation management. If anything, the hard-target kill requirements associated with the massive expansion of the PLARF silo-based ICBM force have made the prospect of relying on conventional capabilities to conduct counterforce missions even more remote.⁴⁹⁵

Shifting the burden? The changing equation of deterrence in Europe

One illustration of the contribution of nuclear counterforce to U.S. strategy can be found in the context of the emergence of what an increasing number of U.S. experts have depicted as a growing “three-body” or “two-nuclear peer” problem. The requirements introduced by the possibility for the United States to face two simultaneous or sequential conflicts with both Russia and China add an increasing pressure on extended deterrence, with potential ripple effects for the Alliance which may, as a consequence, have to rely more on European allies.⁴⁹⁶ More recently, the new U.S. administration has both publicly and privately stated its ambition to prioritize both homeland defense and the Indopacific theater, making it clear to European allies that they should expect greater trade-offs in terms of U.S. resource allocation among various theaters, requiring a greater European contribution to the mission of deterring Russia.⁴⁹⁷

494 Brustlein, De Durand, and Tenenbaum, *La suprématie aérienne en péril*, op. cit., pp. 209-213.

495 For an assessment made before the expansion of China’s ICBM silos, see Tong Zhao, “Conventional Counterforce Strike: An Option for Damage-Limitation in Conflicts with Nuclear-Armed Adversaries?,” *Science and Global Security* 19, no. 3 (2011), pp. 195-222. Greg Weaver notes that “[t]he growth in Chinese nuclear forces also significantly increases the number of nuclear counterforce targets for U.S. forces to potentially hold at risk to either deter aggression and escalation and/or to achieve other U.S. objectives if deterrence fails.” Weaver and Woolf, *Requirements for Nuclear Deterrence and Arms Control in a Two-Nuclear-Peer Environment*, op. cit., p. 9.

496 *China’s Emergence as a Second Nuclear Peer: Implications for U.S. Nuclear Deterrence Strategy* (Livermore, CA: Center for Global Security Research, 2023), p. 70.

497 Alex Horton and Hannah Natanson, “Secret Pentagon memo on China, homeland has Heritage fingerprints,” *The Washington Post* (March 29, 2025). <https://www.washingtonpost.com/national-security/2025/03/29/secret-pentagon-memo-hegseth-heritage-foundation-china/>. Accessed April 4, 2025.

This increasing European burden may not primarily involve nuclear weapons, and focus instead of rebalancing the conventional burden. Thanks to their increasingly ambitious military procurement plans, European allies should be, over time, able to partly substitute to U.S. capabilities in some specific areas such as conventional offense and defense, or heavy land forces, thus giving the United States additional flexibility in its ability to meet the operational and strategic challenges that it would face in the conventional sphere in an increasingly multipolar nuclear landscape.⁴⁹⁸ In March 2025, the EU Commission released a Joint White Paper for European Defense Readiness 2030 which identified a list of seven priority capability areas in which future massive investments are required, inter alia to allow for this new division of labor: air and missile defense; artillery systems; ammunition and missiles; drones and counter-drone systems; military mobility; AI, quantum, cyber, and electronic warfare; strategic enablers and critical infrastructure protection.⁴⁹⁹ Even before that, the signature by the French, German, Italian, and Polish ministers of defense, on July 11, 2024, of a Letter of Intent proposing a “European Long-range Strike Approach” (ELSA) exemplifies the type of ad hoc European efforts that may be increasingly required in the future.⁵⁰⁰

Whether or not France and the UK, the two independent European nuclear powers, will have to compensate for increasing constraints weighing on the United States nuclear forces remains to be determined, and would certainly be context-dependent. While the new U.S. administration has been explicit about its goal of reducing its conventional force posture in Europe, it has not so far signaled any intent to reduce its nuclear posture on the continent. Likewise, an August 2024 think tank report considered to be influential in shaping the defense priorities of the new administration recommended “moderniz[ing] America’s nuclear deterrent in Europe by fielding a larger and more diverse set of limited nuclear options and strengthening NATO nuclear burden-sharing on a cost-effective basis.”⁵⁰¹

However, in a context of growing doubts about the U.S. long-term ability or willingness to remain the primary security guarantor of Europe, the prospect of facing a revisionist Russia while taking on more responsibility for the deterrence and collective defense of the continent has led the next German Chancellor Friedrich Merz to argue for more discussions with the UK and France about their nuclear deterrents.

498 Ben Barry, Henry Boyd, and Bastian Giegerich et al., *The Future of NATO’s European Land Forces: Plans, Challenges, Prospects* (London: International Institute for Strategic Studies, 2023); Anika Binnendijk, Gene Germanovich, Bruce McClintock, and Sarah Heintz, *At the Vanguard: European Contributions to NATO’s Future Combat Airpower* (Santa Monica, CA: RAND Corporation, 2020).

499 *Joint White Paper for European Defense Readiness 2030* (Brussels: EU Commission, 2025), pp. 7-8.

500 Lee Ferran, “Let it go (long) : France joins Germany, Italy and Poland in new ELSA long-range missile project,” *Breaking Defense* (July 12, 2024), <https://breakingdefense.com/2024/07/let-it-go-long-france-joins-germany-italy-and-poland-in-new-elsa-long-range-missile-project/>. Accessed July 15, 2024.

501 Alexander Velez-Green and Robert Peters, *The Prioritization Imperative. A Strategy to Defend America’s Interests in a More Dangerous World* (Washington, DC: The Heritage Foundation, 2024), p. 33.

This has led President Macron to announce he would open a discussion with its European partners on “the protection, by our deterrent, of our European Allies.”⁵⁰²

The French and UK capacity to offset a potential weakening of the credibility of U.S. extended nuclear deterrence in Europe would face different constraints than with conventional offsets. It is undeniable that historically, none of them has been sized or shaped to pursue a mission such as damage limitation which, to be credible, comes with specific qualitative and quantitative requirements for strategic nuclear force structures. Both French and UK nuclear forces have moved away from their initial focus on countercity targeting to include a more diverse set of targets, but their strategies have remained within a countervalue approach, albeit one that explicitly includes—at least in the case of France—holding at risk military targets⁵⁰³.

Having said that, the centrality of damage limitation in U.S. strategy to extend deterrence has been a response to unique political and geographical circumstances: namely, the need to credibly couple the security interests of European allies and those of their distant, extra-European protector, by strengthening the latter’s ability to manage escalation despite the number and diversity of Russian nuclear weapons and nonnuclear strategic strike capabilities. While France and the UK would still have to come up with a way to credibly deter and defend against a variety of Russian options, including scenarios of limited nuclear use, the requirements associated with this endeavor may differ from what they have been for Washington. Indeed, the United States has historically sought—and managed—to compensate, through both hardware and software, for what has been perceived as the relatively low political credibility of extending deterrence across vast oceans. It seems fair to assume that the political credibility of extending deterrence to Europe from Europe would be seen in a different light by potential adversaries, for whom the importance of the stakes in a conflict for the two European nuclear allies would be much more evident from the start. Furthermore, were the decision made by London and Paris to take on a greater role in Europe’s deterrence equation, adjustments in software and hardware would also be considered to ensure that the strategic significance of such a turn would not only be asserted, but demonstrated, vis-à-vis both allies and would-be aggressors.

Conclusion

For decades, the Alliance has benefited from relying on three independent centers of nuclear decisionmaking to deter aggression. This formula, inherited from the 1960s, remains of utmost relevance in the 21st century, as the Alliance faces the prospect of a risk-prone Russia bent on relying on a strategy of nuclear intimidation to pursue a revisionist goal in Europe. In meeting such a challenge, it is crucial that the

502 Emmanuel Macron, “Adresse aux Français” (March 5, 2025). <https://www.elysee.fr/emmanuel-macron/2025/03/05/adresse-aux-francais-6>. Accessed April 4, 2025.

503 In his 2020 speech, President Macron makes it clear that France’s nuclear forces would be able to inflict unacceptable damages by striking adversary centers of power, which can be political, economic or military in nature. See “Discours du Président Emmanuel Macron sur la stratégie de défense et de dissuasion devant les stagiaires de la 27^e promotion de l’Ecole de Guerre,” *op. cit.*

Alliance maintains the ability to deny Moscow's sense of confidence regarding what would be its ability to achieve its goals and control nuclear escalation in a potential conflict with NATO. The existence of U.S. credible nuclear counterforce options has been a unique contribution to that objective. It has not, however, been sufficient by itself to ensure that outcome, since it only makes sense as part of a broader effort to strengthen nuclear deterrence in the Alliance. In the future, the latter would undoubtedly benefit from both a reasserted U.S. commitment to extended nuclear deterrence and a new division of labor with the two European nuclear allies.

Counterforce and Peaceful Change: U.S. Nuclear Commitments to Europe and the “German Question”

Andreas Lutsch⁵⁰⁴

Why have U.S. governments since the 1950s rejected alternative nuclear deterrence strategies, including a “minimum deterrence” strategy, which would have minimized or even abandoned the objective of limiting damage through retaliatory counterforce attacks should deterrence fail and a war occur? Answers to this profound question continue to have an important bearing on how governments of many countries around the world understand and evaluate U.S. nuclear strategy and posture. Answers can also inform the new debate about how the United States should re-calibrate its deterrence strategy and nuclear posture as it anticipates increasingly dangerous rivalries with Russia and China in the context of fundamental shifts in the global nuclear balance of power. These shifts are now largely driven by China’s widely expected rise to a near-nuclear peer to Russia and the United States within the next decade.

This chapter puts current discussions about the objective of damage limitation in U.S. nuclear strategy to strengthen deterrence and a related nuclear posture into an historically informed perspective without being prescriptive about what the United States should do. Thereby, it assumes that “looking back on past realities suggests the limitations on some future possibilities.”⁵⁰⁵

The chapter attempts to offer perspective by analyzing four questions. With a special focus on the positions and roles of Germany over time, these questions relate to longstanding connections between U.S. nuclear strategy and NATO as a nuclear and maritime alliance covering Europe, a region vital to U.S. national security. After an initial section on the importance of humility when analyzing nuclear strategy, these four questions will be examined in three consecutive sections:

First, how important was the U.S. commitment to the objective of damage limitation in U.S. nuclear deterrence strategy and to a related U.S. nuclear posture to contain the Soviet Union and end the Cold War by overcoming the division of Germany and Europe on terms favorable to Western powers? Second, how important was damage limitation from the perspective of German governments during the Cold War with respect to the credibility of U.S. extended nuclear deterrence under conditions of U.S. nuclear vulnerability to Soviet nuclear threats? Thirdly, how important was damage limitation from the perspective of German governments after the Cold War with respect to the credibility of U.S. extended nuclear deterrence? Finally, how might Germany perceive the relevance of this objective in the years to come under

504 The author presents his own views based on publicly available information only, not views of any part of the government of Germany or the Federal University.

505 Richard E. Neustadt und Ernest R. May, *Thinking in Time: The Uses of History for Decision Makers* (New York, NY: The Free Press, 1986), p. 235.

conditions of likely increasing tensions and competition between the United States, Russia, and China?

Humility is a Virtue in Analyzing U.S. Nuclear Strategy

Deterrence of rivals and assurance of allies have always been central objectives of U.S. strategic policy and strategy. Related to the concept of war termination through tacit and explicit bargaining, U.S. governments also viewed damage limitation should deterrence fail and a war occur as an objective for fielding a triad of U.S. strategic nuclear forces. It has been a widespread tendency of many—in academia, liberal arms control communities in Western democracies, disarmament advocacy networks, the media, and among policymakers—to draw sharp lines and even contrast between these objectives as if, for example, deterrence and damage limitation were separable or even contradictory objectives. In practice, U.S. governments appear to have judged over decades that these objectives are interdependent.

Pursuing damage limitation as an objective should deterrence fail has powerful consequences for the ways in which a nuclear power fields a nuclear posture and for how it conducts nuclear deterrence operations in peacetime, crisis, and war. Thereby, offense has trumped defense and will continue to do so. But investing in a nuclear posture to be capable of limiting damage should a war occur can practically relate to a spectrum of estimated outcomes. These outcomes depend on a variety of factors, including the complexity of threats and targets to be addressed in this way, geographic conditions, counterforce capabilities adequate to threats, adaptive intelligence, command, and control capacities, passive and active strategic defense measures, including possibly missile defense capabilities to protect point targets, the level of material investment, the efficiency of efforts to adapt systematically under competitive and technologically changing circumstances, the degree of commitment by decisionmakers, strategists, military planners and operators, various operational specifics relating to military forces involved, as well as estimated likelihoods of operational success in most relevant potential scenarios.

Many appear to agree that damage limitation relates to a military posture “to negate enemy nuclear capabilities before they can destroy their own intended targets.”⁵⁰⁶ In addition, if a disarming first-strike capability is beyond reach for either side, an “indirect, and potentially much more powerful way to limit damage was

506 Leon Sloss, “The Strategist’s Perspective,” in Ashton B. Carter and David N. Schwartz, eds., *Ballistic Missile Defense* (Washington, DC: The Brookings Institution, 1984), p. 36; Office of the Deputy Assistant Secretary of Defense for Nuclear Matters, *The Nuclear Matters Handbook 2020* (Revised), p. 6. <https://www.acq.osd.mil/ncbdp/nm/NMHB2020rev/index.html>. Accessed July 16, 2024. “Counterforce targeting plans to destroy the military capabilities of an enemy force. Typical counterforce targets include bomber bases, ballistic missile submarine bases, intercontinental ballistic missiles (ICBM) silos, air-defense installations, command and control centers, and weapons of mass destruction storage facilities. Because these types of targets may be hardened, buried, masked, mobile, and defended, the forces required to implement this strategy need to be diverse, numerous, and accurate. Countervalue targeting plans the destruction or neutralization of selected enemy military and military-related targets such as industries, resources, and/or institutions contributing to the enemy’s war effort. As these targets tend to be softer and less protected, weapons required for this strategy need not be as numerous or accurate as those required to implement a counterforce targeting strategy.”

to increase the adversary's incentive to limit damage" to oneself "by withholding" attacks on certain types of targets.⁵⁰⁷ Moreover, nuclear-armed adversaries in a relationship of mutual nuclear vulnerability continue to share a vital interest in survival and hence in not losing control, especially also after a selective initial use of nuclear weapons, that is, in the midst of a not yet experienced and unpredictable process which may be uncontrollable and in which no belligerent may be likely to believe in a warning (even if valid) that could "serve as the basis for deciding to launch a suicidally unrestrained response."⁵⁰⁸ Furthermore, if the adversary tends to believe that losing control even after a selective nuclear first use will likely be unavoidable while oneself believes that control will likely be maintained even with limited counterforce strikes in certain scenarios, "deterrence would be maximized."⁵⁰⁹ The role of damage limitation and counterforce postures and related nuclear operations for deterrence purposes is primarily related to influencing the decision calculus and risk propensity of adversaries. This includes influencing adversary perceptions of one's resolve to use nuclear weapons in defense, at least when one's vital interests are at stake, in ways which make adversary aggression and war— not just nuclear war— less likely.

When it comes to U.S. experiences with strategic and "theater" nuclear forces, it is striking to note that especially since early 1960s, Cold War U.S. governments and many Western defense analysts— repeatedly also in public— called for "flexible," "tailored," "controlled," or "limited" "nuclear options," including "limited strategic nuclear options," while on many occasions it was also suggested "that non-massive nuclear options were only then in the process of being adopted."⁵¹⁰

Many observers asked why damage limitation and "preemptive-counterforce options were a major part of U.S. efforts to deter the Soviet Union."⁵¹¹ U.S. government declarations evolved over time in how they specified objectives in the event deterrence

507 Henry S. Rowen and Richard Brody, "The Development of U.S. Nuclear Strategy and Employment Policy," in Andrew W. Marshall, J.J. Martin, and Henry S. Rowen, eds., *On Not Confusing Ourselves. Essays on National Security Strategy in Honor of Albert and Roberta Wohlstetter* (Boulder, CO: Westview Press, 1991), p. 40.

508 Albert Wohlstetter and Richard Brody, "Continuing Control as a Requirement for Deterring," in Ashton B. Carter, John D. Steinbruner, and Charles A. Zraket, eds., *Managing Nuclear Operations* (Washington, DC: The Brookings Institution, 1987), p. 187. They argued that "nothing is harder" for each belligerent to believe in a warning that, even if valid, would be related to a nuclear retaliatory response of a kind which would likely lead to an enemy response that would mean "suicide" of both belligerents (because of a likely retaliatory response to the response to the response). "(...) the widespread impression that the continuing information gathering, processing, and communication requirement for a constrained use of offense or defense weapons is much harder than the job of getting unequivocal warning for massive retaliation is quite misleading."

509 Robert Jervis, *The Illogic of American Nuclear Strategy* (Ithaca, NY: Cornell University Press, 1984), p. 111.

510 Henry S. Rowen, "The Evolution of Strategic Nuclear Doctrine," in Lawrence Martin, ed., *Strategic Thought in the Nuclear Age* (Baltimore, MD: The Johns Hopkins University Press, 1979), p. 132.

511 Austin Long, *Deterrence: From the Cold War to Long War. Lessons from Six Decades of RAND Research* (Santa Monica, CA: RAND, 2008), p. 28.

has failed.⁵¹² On this, there still is a “great divergence” between many practitioners and practice-oriented analysts, on the one hand, and many scholars and ‘critical’ analysts, on the other.⁵¹³ U.S. behavior also had to be contextualized: According to the U.S. intelligence community, the leadership of the Soviet Union did “not endorse mutual vulnerability (...) as a desirable basis for (...) strategic stability” and improved its strategic forces for the purposes of “limiting damage to their society and prevailing (...) in a nuclear war”, should a war with NATO occur.⁵¹⁴ But at least since 1963, as some have suggested early on,⁵¹⁵ “the United States was unable to acquire a significant damage-limitation capability”⁵¹⁶ while a retaliatory disarming first-strike capability against the Soviet Union would remain unobtainable under conditions of mutual nuclear vulnerability. This, in turn, did not prevent leading circles in the Soviet Union from laboring occasionally under mental states of fear and even panic. This was easy to underestimate and difficult to understand. Since the early 1980s, Soviet intelligence made an unprecedented effort “to watch for U.S. preparations for launching a surprise nuclear attack against the USSR and its allies.”⁵¹⁷ A key concern driving this intelligence program was that Soviet strategic nuclear forces were “highly vulnerable to a U.S. surprise attack.”⁵¹⁸ From a structural perspective, this reflected “a

512 National Security Decision Memorandum 242 of 1974 emphasized the decimating of the enemy’s ability to recover after the war. Presidential Directive 59 of 1980 “focused U.S. targeting on Soviet nuclear forces and their military command-and-control facilities, other military forces, and war-supporting industry” as well as on “the Soviet political control system.” Since the 1980s, a focus on assets which enemy political leadership values to hold on to power became central: Franklin C. Miller, “Establishing the Ground Rules for Civilian Oversight,” in Charles Glaser, Austin Long, and Brian Radzinsky, eds., *Managing U.S. Nuclear Operations in the 21st Century* (Washington, DC: Brookings Institution Press, 2022), pp. 58-59. See also Michael S. Elliott, “Turning Presidential Guidance into Nuclear Operational Plans,” *ibid.*, pp. 95-131. The most recent U.S. *Nuclear Posture Review* stated: “The United States would seek to end any conflict at the lowest level of damage possible on the best achievable terms for the United States and its Allies and partners. (...) Central to U.S. deterrence strategy is the credibility of our nuclear forces to hold at risk what adversary leadership values most.” NPR 2022, pp. 8, 11. Note that adversary leaders value their nuclear forces and that determining what they value is a task for intelligence.

513 Eric S. Edelman, “Nuclear Strategy in Theory and Practice. The Great Divergence,” in Hal Brands, ed., *The New Makers of Modern Strategy: From the Ancient World to the Digital Age* (Princeton, NJ: Princeton University Press, 2023), pp. 665-691.

514 NIE-11-3/8, *Soviet Forces and Capabilities for Strategic Nuclear Conflict Through the Mid-1990s* (April 1986), p. 1.

515 On the views of U.S. Secretary of Defense McNamara in 1963 and the Draft Presidential Memorandum of 31 August 1963: Ernest A. May, John D. Steinbruner, and Thomas W. Wolfe, *History of the Strategic Arms Competition 1945-1972, Part II*, Office of the Secretary of Defense Historical Office (1981), p. 526. They also asserted that “the evolving SIOP and the forces to which it applied did not come to provide a decisive damage-limiting capability through preemptive counterforce attack,” *ibid.*, p. 805.

516 Charles L. Glaser and Brian Radzinsky, “Basics of Deterrence and U.S. Nuclear Doctrine and Forces,” in Glaser, Long, and Radzinsky, eds., *Managing*, p. 18. Italics added. Of course, the term “significant” is ambiguous and requires reference points, i.e.: Significant from what perspective or to what?

517 Ben Fischer, *A Cold War Condundrum: The 1983 Soviet War Scare* (Washington, DC: CIA Center for the Study of Intelligence, 1997), summary.

518 The U.S. intelligence community calculated in hindsight that previous Soviet strategic assessments underlying the mentioned indications and warning system “would have shown that after such an attack, Soviet strategic forces could have delivered only about a quarter of the 6,100 warheads necessary to achieve wartime military objectives.” PFIAB, “The Soviet ‘War Scare’” (February 15, 1990), Interagency Security Classification Appeals Panel 2013-015, doc. 1, p. 46. The KGB used a “computer model program (...) called VRYAN, an acronym for ‘Surprise Nuclear Missile Attack.’ KGB analysts responsible for assessing American strategic intentions operated under the premise that if the U.S. ever obtained decisive, overall superiority, it might be inclined to launch a surprise attack on the Soviet Union.”

very real dilemma in the design” of U.S. strategic nuclear forces: “To the extent that we attempt to improve our capability to limit damage to ourselves, we may threaten what Soviet planners regard as their requirement for assured destruction.”⁵¹⁹ The Soviets faced a similar dilemma.

Recent scholarly research has produced important empirical insights about the role of counterforce and damage limitation in U.S. nuclear strategy and posture during the Cold War. These empirical insights can inform how observers think conceptually about nuclear strategy and dynamics of the nuclear age.⁵²⁰ But attempts to understand U.S. nuclear strategy have encountered the problem that knowledge of U.S. nuclear war plans is necessary to substantially reduce uncertainties about the real roles of counterforce and damage limitation in U.S. nuclear deterrence strategy over time. According to former senior practitioners, until the mid-1980s even the U.S. Secretary of Defense and his staff “had been effectively excluded from overseeing the implementation of nuclear war plans” to the extent that top leaders in the U.S. government were in the meantime influenced by a “belief that they had nuclear options—that, in reality, did not exist.”⁵²¹ Most observers will not benefit from a level of insight which such professional windows to nuclear realities provide. Even this single empirical insight should remind us of how difficult it was and is to develop an understanding of the realities of nuclear deterrence.

Because much remains to be understood, it is prudent to expect that, given apparently hard-wired continuities in U.S. nuclear strategy and posture, decisionmakers over time concluded that arguments in support of counterforce and damage limitation were stronger overall than arguments in favor of principal alternatives.⁵²² In the current debate about U.S. nuclear strategy, a familiar analytic pattern is revived: U.S. nuclear war plans remain secret and still some experts judge that the “logic underpinning” an alternative nuclear strategy—namely the one(s) identified by critics who favor “economic and industrial infrastructure” targeting—“is far stronger than the logic underpinning a counterforce approach.” They add that, if historical experiences “are any guide, the prospects for significant change are

519 Speech by U.S. Secretary of Defense, Robert S. McNamara, NPG Washington (April 6-7, 1967), “Agenda Item Ia: SecDef remarks on strategic forces,” National Archives and Records Administration (NARA), RG 200, Box 94, NPG April 1967 Backup, Tabs O-1B (1 of 3).

520 See especially publications from Keir Lieber, Daryl Press, Austin Long, Brendan Rittenhouse Green, Francis Gavin, Matthew Kroenig, James Cameron, William Burr, Niccolò Petrelli, Giordana Pulchini and the “Book Review Roundtable: The Meaning of the Nuclear Revolution 30 Years Later,” *Texas National Security Review* (April 30, 2020), online.

521 Franklin C. Miller, “Establishing the Ground Rules for Civilian Oversight,” in Glaser, Long, and Radzinsky, Managing, p. 61; memorandum Odom (December 24, 1980), “History of the Transformation of Our Strategic Doctrine,” Library of Congress, Zbigniew Brzezinski Papers, Box II, 108, Strategic Doctrine Revision and Long Term Defense Issues 1978-1981.

522 See the *Nuclear Posture Reviews* of 1994, 2002, 2010, 2018, 2022 and William Perry, James R. Schlesinger et al., *America’s Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (Washington, DC: United States Institute of Peace Press, 2009); Madelyn R. Creedon, Jon L. Kyl et al., *America’s Strategic Posture: The Final Report of the Congressional Commission on the Strategic Posture of the United States* (October 2023).

poor.”⁵²³ Thus, critics estimate that the chances for reforming U.S. nuclear strategy according to their preferred alternative paradigm are low, but then double down on their positions.

A historian or diagnostic analyst would rather ask how and why states like the United States have behaved. The question of how they should behave according to alternative human thought paradigms— no matter their quality and intellectual rigor—is of little relevance if such recommendations affect state behavior only insignificantly or not at all. An “actor-specific behavioral model”⁵²⁴ is much more relevant— say, a model of the real pattern of U.S. behavior with respect to the roles of counterforce and damage limitation in U.S. nuclear strategy. This also indicates that conceptual models and probably also theories are necessary to better understand complex phenomena like nuclear strategy. Despite their inherent tendency of blurring the important line between analysis and advocacy, even normative theories may be diagnostically helpful. They can provide a contrasting image to better assess the patterns of real behavior. But reliance on abstract, modeled, theoretical, and normative thinking can induce errors or even bias attempts to understand realities.

Humility is a virtue, especially when we examine nuclear strategy. Observers should not believe what they want to believe until they know what they need to know.⁵²⁵ When it comes to the history of nuclear strategy, much remains unknown and contested despite an astounding degree of transparency especially by the United States.

“Offensive Bias,” Containment, and the End of the Cold War

Looking back at how the United States and its allies tried to contain the Soviet Union and at how the Cold War ended in the ways it did—including Europe’s liberation from Communism and Germany’s reunification in freedom in a strengthened transatlantic alliance protecting a “Europe whole and free”⁵²⁶—it can and should be asked how important the U.S. nuclear commitment to Europe was to these outcomes. More specifically: How important was this commitment based on a U.S. nuclear posture with its damage limitation function for deterrence purposes to sustain the U.S. grand strategy of containing the Soviet Union over decades and to end the Cold War in the ways it ended?

Non-paradoxical key insights are as follows: This sort of U.S. nuclear commitment was almost certainly crucial in both respects; the sustained focus on counterforce in U.S. nuclear strategy and posture contributed to peaceful change in Europe favorable especially to the Western powers; and an alternative U.S. nuclear strategy would likely

523 Charles L. Glaser, James Acton, and Steve Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia. Why America Doesn’t Need More Missiles,” *Foreign Affairs* (October 5, 2023).

524 Alexander L. George, *Bridging the Gap: Theory and Practice in Foreign Policy* (Washington, DC: United States Institute of Peace Press, 1993), p. 138.

525 Modified from David Omand, *How Spies Think: Ten Lessons in Intelligence* (London: Viking, 2020), p. 131.

526 Speech of U.S. President G. Bush in Mainz (May 31, 1989). <https://usa.usembassy.de/etexts/ga6-890531.htm>. Accessed July 16, 2024.

have produced different outcomes, including change of other sorts which would then have heightened, perhaps drastically, elements of danger and risks, including risks of another world war.

“U.S. nuclear strategy has [always had] a strong offensive bias.”⁵²⁷ U.S. nuclear commitments to Europe remained geared to counterforce nuclear strategies and postures. And the U.S. nuclear commitment was, in a power-political sense, the most important layer within a strategic vector in U.S.-led Western containment policy which over the course of four decades after 1945 greatly contributed to bringing about the sorts of dramatic peaceful change which the world witnessed in the late 1980s and early 1990s.

The decline and apparently largely surprising collapse of the Soviet empire and of the Soviet Union had to do with more than just the U.S.-led containment of the Soviet Union—namely, *inter alia*, imperial overstretch, internal problems of the Soviet Union (especially economic), auto-destructive tendencies of reform activities when coupled with the assertiveness of a charismatic leader like Mikhail Gorbachev, and dwindling resilience of Communism and dictatorship over time against the subversive pressure of noble ideas like freedom and justice.

Moreover, the U.S.-led containment of the Soviet Union and Communism was not just about nuclear strategy. Containment encompassed a range of political, economic, financial, and military instruments, measures, and circumstances, including interdependence between North America and Europe, sustained cohesion of NATO despite tensions and problems, and the U.S. maritime dominance in the Atlantic and Pacific. It is also important to note that containment was not static or about the preservation of a status quo. The division of Europe and Germany was never accepted as a status quo and a *modus vivendi* was recognized for most of the time of the Cold War. Especially since the early 1980s, a growing number of diverse actors directly challenged it. These included impactful actors like U.S. President Ronald Reagan and Pope John Paul II,⁵²⁸ who sought to overcome the Cold War peacefully and on terms favorable to liberal democracies.

The grand strategy of containment—backed by the U.S. nuclear commitment which, in turn, rested on a nuclear deterrence strategy designed for war termination and damage limitation should a war occur—was also inextricably connected with the overall Western approach to manage the competition between East and West over divided Europe and Germany in a way which was also legally agreed upon in the London-Paris Accords of 1954/55 between the Western powers and the free part of Germany. An approach to containing the Soviet Union which would either formally or practically have given up on the objective of achieving Germany’s reunification in freedom would have been seen by any German government—regardless of its party-

527 Leon Sloss, “The Ambiguous Role of Strategic Defense in U.S. Strategy,” in Marshall, Martin, and Rowen, eds., *On Not Confusing Ourselves*, p. 56.

528 John L. Gaddis, *The Cold War: A New History* (New York, NY: Penguin Books, 2005), chapter VI.

political composition—as being incompatible with a vital national interest. And for various reasons, it was essential from the perspective of all NATO states to make and maintain Germany’s transatlantic and European alignment with the Western powers as solid as possible. Consequently, the counterforce-oriented U.S. nuclear strategy was also a central pillar of the overall Western approach to manage the “German question” after two world wars which had destroyed the traditional multipolar state system in Europe. It was imperative from the perspective of Western powers, particularly also the United States, to firmly anchor the Federal Republic of Germany in the West, to seek to “inhibit” the emergence of a German interest in an independent national nuclear force,⁵²⁹ and to uphold the stability of liberal democracy and economic growth in West Germany.

In sum, mutually reinforcing elements converged to a powerful strategic vector within Western containment policy which over decades contributed greatly to finally bringing about peaceful change in Europe, including Germany’s unity in freedom as a liberal democracy in alliance with America and European partners. Of course, peaceful change did not mean absence of conflict or conflict potential after the Cold War. And the American nuclear commitment to Germany and Europe, based on a counterforce-oriented nuclear strategy and posture, was the most important layer in that vector. The exact ways in which U.S. nuclear strategy influenced processes leading to these outcomes will almost certainly remain unascertainable.

The point that U.S. nuclear strategy remained counterforce-oriented under conditions of U.S. vulnerability to Soviet nuclear forces can be stated differently: The United States maintained certain levels of competitive tension in its strategic nuclear relationship with the Soviet Union. An inescapably value-laden way of stating that counterforce-oriented U.S. nuclear strategy contributed to peaceful change is to claim that, despite costs, risks, and some appearance of incoherence, this turned out to be beneficial in a world-historical sense— and almost certainly not only so from a perspective focused on the interests of NATO states at the time.

The degree of competitive tension under conditions of mutual nuclear vulnerability appeared to fluctuate over time, just as the behaviors of the United States and the Soviet Union over time were neither uniform, tightly coupled, and highly transparent— nor even internally fully consistent. To enhance deterrence and assure allies, the United States sought to impress upon Soviet leaders and leaders in allied countries that the U.S. systematically calibrated its nuclear strategy and posture— first and foremost its strategic nuclear forces— towards achieving some kind of “optimal amount of first-strike instability”: “enough to deter the Soviets from generating a major crisis (...), but not enough to allow a major crisis to spiral out of control.” The United States constantly balanced between the “objectives of enhancing first-strike stability, on one hand, and extending deterrence and limiting damage, on the

529 Francis J. Gavin, “Strategies of Inhibition: U.S. Grand Strategy, the Nuclear Revolution, and Nonproliferation,” *International Security* 40, no. 1 (2015), pp. 9-46.

other.”⁵³⁰ This balancing act was also reflected in the nuclear arms control process. In it, the U.S. sought to reconcile risk reduction, restraint, and limited cooperation with the Soviet rival with alliance commitments, other international obligations, and perceived requirements of military effectiveness under competitive circumstances. In hindsight, the United States proved to be a more dynamic, sophisticated, effective, and successful strategic competitor than the Soviet Union.⁵³¹

Among the key arguments for why the United States did not discontinue the roles of counterforce and damage limitation in its nuclear strategy is the proposition that asserts the U.S. grand strategic ambition of acting as the leading power or “cornerstone balancer” in regions of geopolitical or even vital interest to U.S. interests.⁵³² A related key argument points to a second grand strategic ambition, the ambition to inhibit the spread of nuclear weapons.⁵³³ Integral to both ambitions has been U.S. extended nuclear deterrence: “To grasp the rationale of counterforce, it is necessary to understand the logic of extended deterrence.”⁵³⁴

Lest to insinuate an unwarranted harmonistic understanding, one point is fundamental: Even with the actual levels of U.S. commitment to a counterforce/damage-limitation-oriented nuclear strategy and posture it was an “unresolved question” especially in the 1970s and 1980s, when the American and European vulnerability to Soviet nuclear forces grew, “whether one or more of the European nations might succumb to Soviet intimidation.”⁵³⁵

Indeed, by the late 1970s and early 1980s, related concerns were widespread. By means of its formidable across-the-board buildup of ground, air, naval, theater-nuclear, and central-strategic nuclear arms, the Soviet Union apparently sought to demoralize particularly the continental European members of NATO in order to win the great prize of their geopolitical allegiance—not necessarily now, but in time and ideally without resorting to military force. In addition, if deemed opportune or if desperately seen as a last resort to avert defeat in the global competition against the United States, another strategy might have been to instigate another round of crises which might make some dose of military force necessary. Such concerns related especially to West Germany. The Soviet Union sought to break West Germany by

530 Glenn A. Kent and David E. Thaler, *First-Strike Stability: A Methodology for Evaluating Strategic Forces*, R-3765-AF (Santa Monica, CA: RAND, 1989), p. 5.

531 This U.S. balancing act was a case of successfully managing “tension between opposites,” a recurrent theme in policy and strategy, cf. Paul H. Nitze, *Tension between Opposites: Reflections on the Practice and Theory of Politics* (New York, NY: Charles Scribner and Sons, 1993).

532 Elbridge A. Colby, *The Strategy of Denial: American Defense in an Age of Great Power Conflict* (New Haven, CT: Yale University Press, 2021), p. 26.

533 Gavin, “Strategies of Inhibition.”

534 Earl C. Ravenal, “Counterforce and Alliance: The Ultimate Connection,” *International Security* 6, no. 4 (1982), pp. 26, 42; Francis J. Gavin, “The Elusive Nature of Nuclear Strategy,” in Brands, ed., *The New Makers*, p. 713: “Nuclear weapons and operational plans that strategists often saw as ‘illogical’ because they threatened strategic stability were, in retrospect, likely shaped to some degree by America’s ambitious grand strategic goals.”

535 James R. Schlesinger, “The Impact of Nuclear Weapons on History,” *The Washington Quarterly* 16, no. 4 (1993), p. 8.

threatening and enticing it, by making its leaders, military, security establishment, and population desperate by instilling in them a sense that defense would be a hopeless endeavor, an act of suicide, by making them understand that West Germany “would burn down like a candle in the first hour of the war”⁵³⁶ no matter how much Soviet nuclear forces might be reduced via arms control. The idea was that by replacing the “Soviet threat” in their perception with an “American threat,” and by tempting these Germans (also because of the division of Germany)—to cognitively and then politically accept a “special relationship”⁵³⁷ with the Soviet Union. That, in turn, might lead to a disintegration of NATO which remained one of Moscow’s grand strategic goals.

In the early 1980s, not a few advocates called for extensive, comprehensive, or all-encompassing efforts to strengthen Western deterrence and defense capabilities—and to greatly increase investments particularly also in U.S. strategic nuclear capabilities: Doing so insufficiently could, if combined with continuing Soviet military investments, lead to a “radical new political structure of Eurasia or to war—or possibly both.”⁵³⁸

In hindsight, it is still stunning when one considers the many political ups and downs and shrillness throughout the 1980s. Indeed, NATO states in some respects made matters even more complicated for themselves by their own actions. The history of INF negotiations and the Western objective of achieving a “zero option” concerning long-range intermediate range nuclear forces, for example, made it increasingly difficult for NATO states to uphold a consensus on extended deterrence and nuclear arms control. This largely self-made problem was amplified by the Soviet Union under Mikhail Gorbachev. Particularly before and after the INF Treaty was concluded, the latent political extended nuclear deterrence crisis within NATO became acute. A culmination point was reached in early 1989. West Germany effectively blocked the modernization of short-range nuclear forces in NATO and the United States—after initial consternation about this assertiveness—offered Germany “partnership in leadership.”⁵³⁹ NATO’s political crisis about extended nuclear deterrence quickly receded when the dramatic upheavals and changes in Europe began to unfold which brought an end of the Cold War, the Soviet empire, and the Soviet Union.

If we consider these contours of actual dynamics, concerns, expectations (positive and negative), and uncertainties, if we also accept that historical processes are contingent, open, and non-teleological, and if we then ponder a counterfactual—without getting carried away by it—of how a U.S. government in the early 1980s opted

536 Statement by Khrushchev on January 16, 1964: annex 2 to circular directive of the German Foreign Office (September 17, 1964), Politisches Archives des Auswärtigen Amtes, Berlin (PA AA), B 43, Bd. 10.

537 According to personal notes by U.S. President Carter, German Chancellor Schmidt had reported at the Guadeloupe summit in January 1979 that Brezhnev had suggested this to him at the German-Soviet summit in 1978: notes by Jimmy Carter (January 12, 1979), Jimmy Carter Presidential Library, NLC 128-4-12-3-9.

538 Fritz W. Ermath, “Die globale Projizierbarkeit sowjetischer Macht und die strategischen Erfordernisse ihrer Eindämmung,” in Uwe Nerlich, ed., *Die Einhegung sowjetischer Macht: Kontrolliertes militärisches Gleichgewicht als Bedingung europäischer Sicherheit* (Baden-Baden: Nomos, 1982), p. 140. Translated by the author.

539 See Bush’s speech in Mainz quoted above.

for an alternative U.S. nuclear strategy which would have reduced—step by step—and even abandoned counterforce and damage limitation in extended nuclear deterrence, then how would this course of action have affected the situation?

Of course, answers to this hypothetical question can only be judgments, not knowledge. An alternative U.S. nuclear strategy would likely have produced vastly different outcomes than the ones experienced—and this concerns both the containment of the Soviet Union and the period from the late 1980s to the early 1990s.

To contextualize this: Even seemingly small changes could well have triggered off profound consequences. For example, had the U.S. government followed the advice of some former high-ranking U.S. government leaders and officials to adopt a “no first use” declaratory policy,⁵⁴⁰ this step alone would likely have produced a strong, perhaps even dramatic effect on NATO states’ perceptions and particularly German government perceptions of the U.S. credibility of U.S. nuclear commitments to Europe.

A renewal of a Berlin Crisis would have become more likely under an alternative U.S. nuclear strategy—and hence another round of direct, open Soviet challenge to the U.S. global power position. Soviet leaders might not have believed as much as they seemed to do in a U.S. willingness to run significant risks in a renewed war of nerves over Berlin, instigated by the Soviets.

Another challenge would appear to have been comparably more likely than a Soviet move to re-ignite tensions over Berlin: an acute crisis particularly of German confidence, with ripple effects hitting NATO strongly and a questioning of U.S. commitments to other regions on the globe which the U.S. might still see as being of vital interest to America. This is because German leaders would very likely have estimated that the Soviet willingness to take calculated risks would grow—and hence the Soviet willingness to “solve” their German problem as a key to “solving” their Europe problem and to “solving” their world problem. Note at this point what we know about the actual process at the time: Even with a counterforce-oriented U.S. nuclear strategy and related investments, there was concern at the highest levels in Bonn. For example, Chancellor Helmut Schmidt in conversation with the U.S. ambassador in Bonn “volunteered the view that he fears a Berlin Crisis will occur around 1984, and that he would not expect a Republican administration to react with the courage shown in former years by democratic administrations.”⁵⁴¹ Now imagine a U.S. government opting for some kind of alternative nuclear strategy.

Let us stop here. This brief review of the historical constellation strongly suggests that a U.S. move—say, hypothetically, in the late 1970s or 1980s—to implement an alternative nuclear strategy to protect Europe based on a reduced or abandoned role of counterforce and damage limitation would likely have produced a demolition

540 McGeorge Bundy, George F. Kennan, Robert S. McNamara, and Gerard C. Smith, “Nuclear Weapons and the Atlantic Alliance,” *Foreign Affairs* (Spring 1982). See also Karl Kaiser, George Leber, Alois Mertes and Franz-J. Schulze, “Nuclear Weapons and the Preservation of Peace: A German Response,” *Foreign Affairs* (Summer 1982).

541 Note by Burns on his conversation with Schmidt on February 15, Gerald R. Ford Presidential Library, Burns Papers, Box U3, Memoranda and Notes: Meeting with Schmidt (February 24, 1982).

effect with profound consequences. Even if, in hindsight, estimative precision about counterfactual effects is impossible and would be untrustworthy if presented as a prediction in hindsight, it should suffice to develop a basic sense that adopting an alternative U.S. nuclear strategy and posture would likely have tended to increase, perhaps drastically, elements of danger and risks, including risks of world war.

When it comes to the Federal Republic of Germany, a basic political-strategic understanding as volunteered by U.S. President Richard Nixon in 1970 in the U.S. National Security Council may have been too blunt and too vague at the time. But as the next section of this essay suggests, his understanding was probably more accurate than wrong considering German perceptions of the nuclear balance of power and operational aspects of U.S. nuclear strategy:

(...) any strategy without a credible deterrent would mean the Soviet domination of Europe. (...) This discussion must center on the effect on the Germans of what we do. Their response will not necessarily be rational; probably it will be emotional. They are a vigorous people, denied the use of their own weapons, who will make a deal with whoever is Number One. (...) It is not insignificant that the Russians always emphasize that they think they are superior to the U.S. in nuclear forces. They say this to get France, the UK, Germany and Japan to have doubts about the credibility of the US nuclear deterrent and also to show who is Number One. So no one should concede that the USSR is ahead. We should point out, as we do, that they are moving ahead (...) but we should stress that our overall strength is sufficient. Otherwise we are in a dangerous position with the Japanese and our NATO allies, particularly the FRG.⁵⁴²

German Perceptions of Counterforce and Damage Limitation during the Cold War

How important was damage limitation from the perspective of German governments with respect to the credibility of U.S. extended nuclear deterrence under conditions of U.S. nuclear vulnerability to Soviet nuclear threats? The short answer is: U.S. capabilities, preparations, and messaging about being able to vigorously pursue this objective, if deterrence failed, were core requirements for upholding a politically sufficient degree of credibility of U.S. nuclear protection in the eyes of German government experts and decisionmakers over time. Before specific German government perceptions from the Cold War will be highlighted, three caveats must be noted. They indicate why this question is difficult to examine.

542 Minutes of a NSC Meeting (November 19, 1970), Foreign Relations of the United States (FRUS), 1969-1976, XLI, doc. 53.

Three caveats

A first limitation arises from information-related uncertainties. The issues to be considered here were very secret during the Cold War. There is no reason to expect that this changed thereafter. These uncertainties should not be exaggerated with respect to the Cold War period, though. Key episodes and experiences can be understood based on government records which were formerly highly classified but became publicly accessible through declassification.

A second caveat results from the properties of the reference object: “perceptions.” States cannot perceive, even if the inescapable need to simplify may suggest the misleading contrary. Nor do states have an official mind. Nor are governments or large organizations within governments like ministries or even constituent parts of such organizations monolithic. Instead, we encounter strands of thinking of real persons who operate in a certain government system that filters information and structures decisionmaking in certain ways. These persons wrestle with structural and subjective elements influencing their own and other people’s cognitive processes which are not free from errors. The human factor also matters in other respects, especially when the importance of leaders is considered. Still, certain tendencies in perception may matter more, perhaps exceedingly more, than others in the process when government positions crystallize. Main perceptual tendencies may be highly durable, whereas other perceptions may be fleeting.

A third challenge is that perceptions of a U.S. ally like Germany concerning counterforce and damage limitation in U.S. nuclear strategy and posture related to a complex issue area of relevant sensitive elements, including:

- political characteristics of U.S. nuclear commitments such as treaty commitments, regulatory arrangements, and “the political situation”—including leadership behavior—plus related overall estimates of U.S. political-strategic resolve to use nuclear weapons to defend allies,
- existing and planned strategic and “theater” nuclear forces and air defense capabilities, their characteristics (including numbers, composition, flexibility, diversity, adaptability, effectiveness, responsiveness, survivability, usability also after adversary nuclear attacks), their demonstration in peacetime, and related messaging in times of tension and crisis
- intelligence and target acquisition capacities before and in war
- nuclear command and control infrastructures before and in war
- characteristics of strategy related to realistic potential paths to war and war scenarios (“*Kriegsbild*”) which, in turn, includes

- specific deterrence objectives and a practical understanding of what the U.S. means when it declares that “the United States would seek to end any conflict at the lowest level of damage possible on the best achievable terms for the United States and its Allies and partners”⁵⁴³
- contingency plans and actual war plans
- force planning, including identification of pre-planned and adaptively locatable targets of different classes and categories (especially time-sensitive high-priority targets), planned engagement of targets with delivery platforms of specific characteristics and nuclear weapons with specific effects depending on plannable and unpredictable conditions, plus alerting and force generation systems
- the nuclear “campaign plan”⁵⁴⁴ or “overall scheme of fires”⁵⁴⁵ based on coordination and integration between U.S. war plans for strategic forces and plans for nuclear forces assigned to NATO command, including specifics on sequencing, speed, scope and types of escalation, consultation with allies if time permitting, degrees of vulnerability of adversary targets, and estimated likelihoods of operational success.

German perceptions during the Cold War

During the Cold War, assuring U.S. allies in Europe and especially Germany remained a never-ending task for the United States. The United States also found itself repeatedly confronted with a need to deal with acute crises of German confidence, especially in the late 1950s and early 1960s, then again in the mid-through late 1970s, and finally in the mid-through late 1980s. Germany’s assurance demands together with the security implications of managing the *modus vivendi* and competition with Moscow over the “German question” provided a nearly constant flow of stimuli for the U.S. to reconsider and reconfirm strategic logics which informed U.S. counterforce postures and strategies. In parallel, the U.S. sought to balance competing demands of strategic stability and both “superpowers” understood that a disarming first strike capability against one another was and would almost certainly remain unobtainable.

A central insight here is this: During the Cold War, near constant and systematic U.S. assurance efforts based on adaptive strategic and theater nuclear postures to deter and limit damage to America and Europe should a war occur remained a core

543 NPR 2022, p. 8.

544 Joint Publication 3-72, Nuclear Operations, (June 11, 2019), III-3.

545 Joint Publication 3-72, Nuclear Operations, (June 11, 2019), V-3.

requirement for upholding German leaders' and officials' incomplete confidence in the credibility of U.S. extended nuclear deterrence commitments to Europe.

Germany's expectations of the United States were more demanding on specifics related to nuclear operations than is widely realized. But Germany's expectations were also less demanding than those suggest who contend that, at least in the late 1950s and early 1960s, Germany sought an independent national nuclear force mainly because of an alleged lack of confidence in U.S. nuclear protection. Particularly in acute crises of German confidence, U.S. assurances about the U.S. commitment to the objective of damage limitation in nuclear strategy and extended deterrence were crucial from the perspective of German government experts and decisionmakers. To buttress these points, illustrative insights about key episodes and issues will be presented. The focus is on the early 1960s.

The Importance of the Strategic Nuclear Balance from an Operational Perspective

When it became clear in the late 1950s that the vulnerability of the continental U.S. (CONUS) to Soviet nuclear forces was and would remain a fact of life—in the sense that the vulnerability of the U.S. might be reduced but not annulled in war—German experts' perceptions of U.S. assurances about the degree to which the United States would likely be able to limit damage to America and Europe were central for beliefs and judgments in the German government about the current and future credibility of U.S. nuclear protection.

A crucial episode was the American-German summit meeting in November 1961 amid the Second Berlin Crisis. The first central issue was how much the Soviet Union was currently deterred from further escalating this crisis and how deterrence could be concretely strengthened. The second central question was how robust U.S. extended nuclear deterrence would be in the years to come, with American-Soviet near-“parity” in strategic forces looming on the horizon a decade ahead. The third central issue remained implicit: why Germany—at least from a nuclear-strategic perspective—would not need a nuclear force of its own, considering the emerging strategic balance between the Soviet Union and the United States, in general, and U.S. counterforce capabilities, in particular.

As Lyman Lemnitzer, the Chairman of the U.S. Joint Chiefs of Staff, noted, the German delegation was given “very highly classified information which goes far beyond anything that I believe the FRG have been given to date.”⁵⁴⁶ A key component was a detailed briefing on the strategic balance and U.S. nuclear strategy from an operational perspective. It stressed the comparatively high degree of vulnerability of Soviet strategic forces and pointed to NATO's “marked military superiority for major nuclear war” despite “great Soviet progress” in fielding nuclear forces. It

546 Memorandum Lemnitzer for Norstad (November 25, 1961), Dwight D. Eisenhower Presidential Library, Abilene, KS (DDEL), Norstad Papers (NP), Box 103, JCS, Nov. 1961-Dec. 1962 Vol II (6).

provided the estimate that the United States “will retain this superiority for the foreseeable future,” considering the U.S. nuclear force modernization programs.⁵⁴⁷ The initial German reaction at the summit was an expressed acknowledgement of the “U.S. nuclear strength” and “command and control capabilities” which the German delegation considered to be “superior to that of the Soviet Union.”⁵⁴⁸ Despite rather frank exchanges during the summit, elements of disagreement and latent conflicts of interest on other defense strategy issues unsurprisingly persisted, including on the concept of a “pause” before nuclear weapons might be used in a “limited war.” But on the mentioned basic points, which indicated a strong U.S. commitment to extended deterrence and the objective of damage limitation, there remained essential agreement in internal strategic assessments in Bonn.⁵⁴⁹

Later, under conditions of strategic nuclear “parity” or “essential equivalence,” U.S. assurances to the effect that, despite great Soviet improvements in strategic forces, the U.S. retained a “substantial margin of superiority in strategic forces”⁵⁵⁰ remained important at least from the perspective of German government experts. Put metaphorically, the German government wished to see political “détente and superiority;” that is, certain U.S. advantages in the strategic balance and strategic arms competition with the Soviet Union.⁵⁵¹ The American-Soviet SALT I negotiations and the SALT package of 1972—the ABM-Treaty and the Interim Agreement on Offensive Strategic Forces—appeared acceptable to Germany, also because the agreements did not enshrine “parity” or “equality” in all of the supposedly most relevant parameters for measuring the strategic balance.⁵⁵²

Taken together, it should be rather clear that German perceptions of the current and emerging strategic nuclear balance from an operational perspective, including perceptions of U.S. capabilities and U.S. resolve to limit damage should a war occur, were crucial to how the German government made its own calculations about the credibility of U.S. extended nuclear deterrence.

547 Speaking Notes of November 20, 1961 for “restricted military briefing” by Major-General John A. Heintges for Chancellor Adenauer and his delegation on November 21, 1961, John F. Kennedy Presidential Library, Boston, MA (JFKL), PP, NSF, Countries, Box 79A, Germany, Subject, Adenauer Visit 11/61.

548 Point by Brig. Gen. Albert Schnez: memorandum for Record from CJCS Lemnitzer, Briefing for Chancellor Adenauer at the White House (November 21, 1961), DDEL, NP, Box 103, JCS, Nov. 1961-Dec. 1962 Vol II (6).

549 Inter alia: Memorandum Werz (June 15, 1962), *Akten zur Auswärtigen Politik der Bundesrepublik Deutschland (AAPD) 1962*, doc. 246; report by Minister of Defense Franz J. Strauss to the Federal Defense Council (FDC) (May 15, 1962), Bundesarchiv Koblenz (BA), B 136, Bd. 58609; report by Brig. Gen. Ferber to the FDC (October 31, 1963), BA, B 136, Bd. 58609.

550 Report by SecDef Laird on the “strategic balance,” 5th NPG Ministerial Meeting, London (May 29-30, 1969), GRFL, Laird Papers (LP), Box C13, NATO (1969-1973), doc. 30-31.

551 Point made by Gerard Smith, see FRUS 1969-1976, XXXIV, doc. 32.

552 Memorandum “Leitgedanken für die bei den SALT einzunehmende deutsche Position,” AAPD 1969, doc. 232; Andreas Lutsch, *Westbindung oder Gleichgewicht. Die nukleare Sicherheitspolitik der Bundesrepublik Deutschland zwischen Atomwaffensperrvertrag und NATO-Doppelbeschluss* (Berlin; Boston: de Gruyter Oldenbourg, 2020), pp. 441-463.

Counterforce and the Security of Berlin

A related special problem of grand strategic importance to the United States was how to protect the three Western sectors in the divided city of Berlin in the face of attempts by the Soviet Union under Nikita Khrushchev and, potentially, his successors to coerce the U.S., France, and Great Britain to withdraw from this city in order to “change the way the world perceived the balance of power and then ride that achievement to victory on the great diplomatic issue of the time”: the “German question.”⁵⁵³ Many believed that the latter could, if achieved, produce far-reaching political effects of grand strategic significance so that the Soviet Union might finally be able “to dominate Europe and, by so doing, dominate Asia and Africa also.”⁵⁵⁴

The United States remained committed to the Western parts of Berlin also because Germany wished to see the U.S. remaining committed to Berlin. This wish was because of German national interests and a related prospect for peaceful reunification of a free and liberal-democratic Germany at some future point. But Berlin was indefensible. To the Soviets, it was “the key pressure point testing the firmness of American guarantees to Europe.”⁵⁵⁵ Its security ultimately depended on U.S. nuclear deterrence. This required sufficient U.S. resolve to make threats of selectively using nuclear weapons first in self-defense, if necessary, coupled with threats of using strategic nuclear forces, if the Soviet Union did not cease its aggression. And the latter, in turn, related to the existing U.S. nuclear strategy for strategic forces, including the objective of damage limitation. The special problem of securing Berlin added special weight to the perceived need for the United States to maintain and invest in counterforce capabilities adequate to the Soviet nuclear threat. As German Minister of Defense, Franz J. Strauss explained to U.S. President John F. Kennedy: “the German concern about the possible loss of Hamburg and Munich (...) related to Soviet counteraction to Western moves in Berlin. If it were not for Berlin, there would be no problem because any Soviet attack would mean general war. For example, fear of general war deterred Soviet moves against Turkey or weakly-defended Northern Norway.”⁵⁵⁶ Strauss’s basic understanding was this: Suppose that in a developing Berlin crisis instigated by the Soviet Union Soviet forces in East Germany had attacked West Germany with initially limited operational objectives. Then the United States and NATO would have to threaten, at a relatively early point, and, if necessary, implement a selective initial use of nuclear weapons to pressure the Soviet Union to back down. This would have to be coupled with U.S. threats of using strategic forces if the Soviet Union did not back down. This sort of understanding underlined the central importance—particularly also from a German government perspective—of U.S.

553 Ernest R. May and Philip D. Zelikow, *The Kennedy Tapes. Inside the White House during the Cuban Missile Crisis* (Cambridge, MA: The Belknap Press of Harvard University Press, 1997), p. 691.

554 Paul H. Nitze, *From Hiroshima to Glasnost. At the Center of Decision. A Memoir* (New York, NY: Grove Weidenfeld, 1989), p. 197.

555 Ibid., p. 18.

556 MemCon JFK-Strauss et al. (June 8, 1962), JFKL, PP, NSF, Country Files, Box 75A, Germany General (June 1962).

counterforce capabilities and damage limitation to influence Soviet risk perceptions and deter the Soviet Union from initiating limited aggression in the context of a Berlin crisis. This meant that, at least from the German perspective, U.S. strategic counterforce capabilities did not just have a profound role to play in deterring a direct Soviet attack against West Germany and NATO, but also to deter limited Soviet attacks in more complex scenarios of a potential “hot” Berlin crisis.

Holding the Soviet Nuclear Threat to Europe at Risk

One of the most sensitive issues relating to Germany’s expectations of the role of counterforce and damage limitation in U.S. nuclear strategy was the operational problem of how Soviet nuclear forces threatening Europe could be effectively held at risk, with time-sensitive targets like the Soviet SS-4, SS-4, and later SS-20 intermediate- and medium-range missiles (IR/MRBMs) having top priority. Since the early 1960s, U.S. governments sought to assure the government in Bonn that existing and future U.S. strategic forces held and would continue to hold also Soviet IR/MRBMs effectively at risk and that the U.S. would assign them the “same priority” as Soviet intercontinental nuclear systems which threatened the CONUS.⁵⁵⁷

These specific assurances were greatly important to German government evaluations of the credibility of U.S. nuclear extended nuclear deterrence. From a deterrence standpoint, the critical issue was how effective existing and planned U.S. counterforce capabilities would practically be to limit damage also to Europe. Operational-technical estimates were more significant than ‘political’ assurances. It is crucial to note that the German government under Chancellor Konrad Adenauer directly linked its urgent demands for effective damage limitation, especially regarding Soviet IR/MRBMs to Germany’s renunciation of a national nuclear force.⁵⁵⁸ Initially, it did so based on the firm position that U.S. assurances “to use strategic forces to cover the MRBMs threatening Europe in the first strike do not correspond to the actual requirements.” From the standpoint of the German government, these requirements called for a counterforce posture of mobile land- and sea-based MRBMs in Europe which would have to be coordinated with the U.S. Strategic Air Command.⁵⁵⁹ The German government judged—similarly to the Supreme Allied Commander Europe—that effective counterforce targeting at least of most important time-sensitive targets required MRBMs in Europe. In addition, the government judged that nuclear sharing, including German participation, would be the best arrangement under which MRBMs should be introduced. Importantly, the Germans asserted that “they did not want to

557 See inter alia: MemCon McNamara-Nitze-Strauss (December 12, 1961), NARA, RG 200, Box 133, MemCons with Germany I-II, Vol. I, Sect. 1; report by Minister of Defense Franz J. Strauss to the FDC (May 15, 1962), BA, B 136, Bd. 58609; remarks by Secretary McNamara, NATO Ministerial Meeting (May 5, 1962), Restricted Session, Digital National Security Archive, NH00970.

558 See inter alia: MemCon Adenauer-Rusk et al. (June 22, 1962), FRUS 1961-1963, XIII, doc. 145.

559 Memorandum FÜ B III 8 (June 8, 1962), AA-BMVg-colloquium in Münstereifel, PA AA, B 130, Bd. 1999A.

own their own weapons system, but did want to be assured of effective coverage of Soviet MRBM's in a way which formed a credible deterrent.”⁵⁶⁰

Conceptions for a NATO MRBM force were discussed between 1960 and 1966. But an MRBM posture was not established. Consequently, U.S. assurances about the role of U.S. strategic forces to deter the use of Soviet nuclear forces threatening Europe, especially IR/MRBMs, were even more important. And U.S. governments offered related assurances on various occasions throughout the 1960s and early 1970s. These specific assurances became also elements of the context in which the Federal Republic of Germany acceded to the Nuclear Non-Proliferation Treaty, based on the precondition that the United States would continue to provide nuclear protection to the NATO alliance which, in turn, hinged also on U.S. assurances relating to extended deterrence based on a U.S. nuclear posture for “assured destruction” and damage limitation.

At the first ministerial meeting of the newly established NATO Nuclear Planning Group in 1967, for example, U.S. Secretary of Defense Robert S. McNamara stated that U.S. strategic nuclear forces were “more than adequate” for deterrence and that “in the event a war nevertheless occurred,” the United States would use strategic forces “to limit damage to all of our populations and industrial capacities by destroying as large a number of Soviet offensive missiles as may be possible in the circumstances before they are used against us.” In addition, he pointed to ongoing U.S. modernization efforts, such as “accelerating the POSEIDON development,” “deployment of MINUTEMAN III with 3 MIRVs,” and “development of new small reentry vehicles” for future ICBMs and SLBMs. These efforts would “increase greatly the number of separate weapons we could place over the Soviet Union.” Consequently, the United States would “have as great a deterrent over the next five years as we have had at our disposal during the past five.”⁵⁶¹ In early 1969, Deputy Secretary of Defense Paul H. Nitze reaffirmed that the U.S. retained an “assured destruction” capability and that U.S. strategic forces covered “fixed, land-based military threat targets” in the Soviet Union, while assigning the “same priority” to Soviet nuclear forces threatening Europe and America. To cover the “threat to Europe,” “a significant portion of our highest-quality quick-kill systems are specifically assigned this task,” Nitze added. The “alert weapons in the U.S. strategic forces will more than double over the next four years.”⁵⁶²

Especially to the German government, “U.S. targeting of IR/MRBMs” appeared to become something like a “symbol of the U.S. nuclear guarantee.”⁵⁶³ When the Soviet Union began to deploy mobile SS-20 IRBMs in 1976, new German concerns arose

560 On this point by Strauss, see Memorandum Weiss (December 20, 1961), NARA, RG 59, DF-LF, PM, CPO, box 4, NATO Nuclear Studies thru Paul Nitze.

561 NPG, Agenda Item Ia: SecDef remarks on strategic forces, NARA, RG 200, Box 94, NPG (April 1967) Backup, Tabs O-1B (1 of 3).

562 Nitze Speech before the NATO DPC (January 19, 1969), GRFL, LP, Box C13, NATO (1969-1973), Doc 1.

563 Memorandum “Evaluation of possible strategic arms control agreements between the United States and the Soviet Union” (March 21, 1970), NARA, RG 59, DF-LF, PPC, MR, Box 298, SALT (March 1970).

about how effective U.S. strategic forces would be in covering them. A critical concern was that their mobility made SS-20s “far harder to target than earlier MR/IRBMs (we had specifically assured the Europeans in the 1960s that the MR/IRBM threat was balanced because launcher sites were covered by external U.S. strategic missile forces).”⁵⁶⁴ This concern was difficult for the United States to address.⁵⁶⁵ In any case, NATO’s dual track decision of 1979 became the central political-military approach for the allies to react to the attempt of the Soviet Union to achieve “euro-strategic” advantages in the ongoing nuclear arms competition with the United States.

As these illustrations indicate, Germany’s expectations of the role of counterforce and damage limitation in U.S. nuclear strategy and posture were demanding and specific, at least with respect to how core elements of the Soviet nuclear threat to Europe could be held at risk. Related German perceptions of U.S. nuclear strategy remained critically important to uphold a politically meaningful degree of German confidence in U.S. nuclear protection arrangements.

Other Episodes

There are other episodes of relevance if one seeks to understand how German governments during the Cold War evaluated the roles of counterforce and damage limitation in U.S. nuclear strategy and posture. It would exceed the scope of this chapter to consider them. But some shall be mentioned, that is, German perceptions of

- U.S. adaptations based on NSDM 242 of 1974, including proposals for Limited Nuclear Options (LNOs), Select Attack Options (SAOs), and Regional Nuclear Options (RNO)
- the Presidential Directive/NSC-59 of 1980 (the so-called “countervailing strategy”) and follow up steps during the Reagan and Bush-41 presidencies

564 Memorandum Hartman, Vest, Lord (October 18, 1976), NARA, RG 59, DF-LF, OC, Container 5, DEF 3 Nuclear Planning Group (NPG).

565 When confronted in Bonn with arguments for why “reliance on external strategic forces to respond to regional or theater nuclear attack by the Soviets is (...) less credible than a theater response,” U.S. officials stressed that targets of concern to Western European security were covered by roughly 4,000 warheads of U.S. strategic systems and that is was “self-defeating” for NATO to question these arrangements: Memorandum Gelb, Cruise Missile Consultations in NATO, Bonn and London, n.d., JCL, NLC 132-15-4-2-2. The “great bulk of target coverage of interest to NATO” could be provided because of remaining advantages in warheads deliverable by U.S. strategic systems: telex Bennett (March 7, 1978), Report on Feb 24 NAC (point made by Slocombe), JCL, NLC 16-23-6-13-9. In contrast to what appears to have been the majority view among specialists in Bonn, some German officials were skeptical if not suspicious. The Director of Policy Planning in the MoD (a political appointee from the SPD), Walter Stütze, e.g., asked: “One question not fully answered by the United States was whether the Americans would maintain a capability to neutralize the Soviet grey area threat over the next 10 years. United States officials had assured him that the American superiority in warheads would be sufficient for this purpose.” MemCon Quinlan-Stütze et al., (April 24, 1978), The National Archives, London, FCO 46/1820. “Grey area” systems referred to Soviet nuclear forces— such as IR/MRBMs— which were not yet regulated by arms control agreements. In contrast, the majority view among specialists in Bonn was that U.S. assurances remained trustworthy. One element of justification was that an estimate given by U.S. Secretary of Defense Harold Brown was deemed valid at least through the mid-1980s: U.S. advantages in warheads deliverable by U.S. strategic systems were important to uphold extended deterrence even in the face of growing disparities in IR/MRBM systems in Europe: memorandum Dannenbring (November 10, 1978), PA AA, B 150, Bd. 404. For a similar assessment that stressed the importance of remaining U.S. advantages in the strategic balance, again with a special focus on deliverable warheads: memorandum Dannenbring (October 4, 1977), PA AA, B 150, Bd. 377.

- potential and actual roles of ballistic missile defense (BMD)
 - BMD in Europe against nuclear missiles such as IR/MRBMs
 - U.S. strategic BMD capabilities resulting from the U.S. Strategic Defense Initiative to protect point targets in the CONUS in support of deterrence in a future security environment
- U.S. adaptations in command, control, and intelligence systems.

German Perceptions of Counterforce and Damage Limitation After the Cold War

How important were counterforce and damage limitation from the perspective of German governments after the Cold War with respect to the credibility of U.S. extended nuclear deterrence?

Even a clear-eyed observer might initially be inclined to hypothesize that this question must have been practically close to irrelevant. The observer might point out that even high-level German policymakers on various occasions provided stark proof of their capacity for engaging in the pleasures of self-delusion when it comes to nuclear issues. How could such persons simultaneously think about counterforce? After all, it was a German foreign minister who in 2010 not only estimated that “within 10 years the number of nuclear-weapon states could have doubled.” He also declared that nuclear weapons “are relics of the Cold War: they no longer serve a military purpose, they do not create security and so, in the view of the Federal Government, they have no future.”⁵⁶⁶ These were disastrous misestimates.

But their importance and the importance of publicly visible silhouettes and rhetorical representations of German security policy with respect to nuclear weapons and deterrence should not be exaggerated. Though nuclear arms control issues played an important role in the ways in which German governments approached nuclear security after the Cold War, not too much weight should be put on political disarmament rhetoric. For example, the “goal” of “a safe world free of nuclear weapons,” proclaimed by German governments to this day,⁵⁶⁷ has never determined how nuclear powers and how states that rely on nuclear deterrence without controlling nuclear weapons behaved in an international system in which nuclear weapons exist. This a classic example of a divergence between appearance—diplomatic proclamations about chasing a “contemporary ‘Great Illusion’”⁵⁶⁸—and substance—repeated assertions to the effect that “[a]s long as nuclear weapons exist, maintaining credible nuclear deterrence is essential for NATO and for European security.”⁵⁶⁹

⁵⁶⁶ Speech by Guido Westerwelle on the Federal Government’s Annual Disarmament Report to the Bundestag (March 26, 2010). <https://www.auswaertiges-amt.de/en/newsroom/news/100326-bm-bt-abruestung/218410>. Accessed July 19, 2024.

⁵⁶⁷ *The Federal Government, Robust. Resilient. Sustainable. Integrated Security for Germany. National Security Strategy*, (2023), p. 46.

⁵⁶⁸ Keith B. Payne, “Nuclear Disarmament: The Contemporary ‘Great Illusion’?”, *NIPP IS*, no. 552 (April 19, 2023).

⁵⁶⁹ The Federal Government, *National Security Strategy*, p. 32.

Hence, observers should guard against premature conclusions. If the weight of history is taken seriously and if we bear in mind the notion that NATO allies' positions with respect to nuclear deterrence appeared to change at glacier speed in the more than 30 years after the Cold War, the ways in which Germany positioned itself with respect to counterforce and damage limitation in U.S. strategy during the Cold War should be expected to have had an important influence on how reunified Germany positioned itself. Great uncertainties in the information base also must be taken into account. The above-mentioned research question cannot be examined even with a minimal degree of confidence until relevant government records will be declassified. Still, a brief provisional lead-up analysis shall be offered here which identifies the year 2022 as the key threshold in Germany's post-Cold-War positioning with respect to nuclear deterrence. This makes for two periods, firstly, from the early 1990s through 2022 and secondly, a still-unfolding period following Russia's direct military attack against Ukraine in 2022.

From Germany's Reunification to Russia's Invasion of Ukraine

For the first time in the history of the German nation-state after the end of the Bismarck era in 1890, the Germany of and after 1990 was a status quo power with a "final" territoriality conception and a reinforced status as a Non-Nuclear Weapons State according to the "Treaty on the Final Settlement with Respect to Germany" and other international legal accords dating to the end of the Cold War. These parameters apparently shaped widely held cultural conceptions of how many policymakers in Germany often tended to perceive and understand the world. Because an influential self-conception was that "we" accept the territorial status quo and see nuclear weapons as relics of the past, the inclination was apparently to project such beliefs onto the belief systems of others, to misunderstand them, and then to play down even violent behavior of a state like Russia who has used military power under a nuclear shadow to redraw borders and refashion rules. In May 2014, German Chancellor Angela Merkel warned: "In Crimea we're experiencing a regression into old patterns of thinking" about a "sphere of influence."⁵⁷⁰ Implicit connotations were: The regression was regrettable and reversible, at best temporary, and not consequential enough for European security to move beyond a business as usual approach or to fundamentally rethink how Russia could be deterred from further "probing with bayonets," to paraphrase Lenin.

The topic of how reunified Germany positioned itself with respect to nuclear deterrence cannot be understood without the broader foreign and security policy context, including the proclaimed "strategic partnership" with Russia during most

570 Reuters (May 7, 2014). <https://www.reuters.com/article/idUSBREA460WS/>. Accessed July 19, 2024.

the period until the rupture of 2022.⁵⁷¹ Without changing and without intending to change its alliance relationships with the United States, Canada, and a growing number of European allies in the EU and NATO, Germany—akin to most “Western states” — developed sectoral partnerships with Russia especially in trade, energy, counterterrorism, arms control, and cultural relations. For three decades starting in the early 1990s, the exclusive focus of the armed forces became international stability missions. These missions, most notably Germany’s engagement in Afghanistan from 2001 to 2021, absorbed a lot of attention and were thus also a source of distraction. Since 2014, Germany “contributed constructively” to enhance NATO forces’ readiness (following the NATO Summit in Wales 2014) and NATO’s deterrence and defense posture (following the NATO Summit in Warsaw).⁵⁷² On the level of political leadership, attention to the global nuclear balance and nuclear deterrence apparently atrophied near totally. Many policymakers also appeared to show quasi indifference, if not ignorance, to adverse strategic trends, including Russia’s efforts to modernize its nuclear forces, the demise of the INF-Treaty (in which Germany had been a quasi-stakeholder because it unilaterally gave up PERSHING IA missiles when the treaty was concluded), disparities in the nuclear balance between Russia and NATO on the “non-strategic” level, Russia’s annexation of Crimea, and Russia’s attempts at coercive use of nuclear deterrence in 2014.

One of the most important cultural characteristics was missing strategic thinking on the part of many influential foreign and security policy elites in Germany.⁵⁷³ Despite more and more signals to the contrary, many German policymakers between the late 2000s and late 2021 largely appeared to have perceived a relatively quiet environment in Europe. They also seemed to have self-conditioned themselves to a peaceful routine based on misplaced confidence in and mirror-imaging of their own beliefs that military power and especially nuclear weapons were of little relevance also with respect to stability between Russia and NATO. Such beliefs in effect were desired self-fulfilling prophecies becoming self-denying prophecies, even if the gradual deterioration of NATO-Russia relations was not inevitable. Throughout this period of the 1990s, 2000s, and particularly the 2010s, there was also vehement resistance by an overwhelming majority of German policymakers and pundits against the whole notion that “the leaders of Russia and China are revisionist in their orientation both to regional orders and to the global order. (...) They prefer (...) spheres of influence. (...) They don’t seek to join, accommodate, or revise existing regional orders; they seek to

571 In many debates, Germany’s policy on NATO nuclear sharing and its Russia policy were connected issues, cf. Wolfgang Ischinger and Ulrich Weisser, “NATO and the Nuclear Umbrella,” *The New York Times* (February 16, 2010): “it would be a great mistake for NATO and its members to cling to the Cold War perception of Russia as a potential aggressor and not as a strategic partner (...). Security and stability in Europe are only possible with Russia.”

572 Rainer Meyer zum Felde, “Abschreckung und Dialogbereitschaft – der Paradigmenwechsel der NATO seit 2014,” *SIRIUS – Zeitschrift für strategische Analysen* 2, no. 2 (2018), p. 116.

573 Erich Vad, “Angela Merkel und das Dilemma deutscher Sicherheitspolitik,” in Philip Plickert ed., *Merkel: Eine kritische Bilanz* (Munich: FBV, 2017), p. 241.

break them and replace them with an alternative of their making.”⁵⁷⁴ In sharp contrast, the usual refrain in Germany was that there was “no reasonable alternative to equal partnership” with Russia, détente, de-escalation, and dialogue.⁵⁷⁵ Culturally and politically, such views were deeply rooted, including in the German system of higher education where views inspired by “peace research” communities predominated.⁵⁷⁶ There were important deviations, though.⁵⁷⁷ Germany’s foreign intelligence service appears to have been a case in point.⁵⁷⁸ This suggests that throughout the 2010s and early 2020s German security policymaking may more and more have proceeded under growing adverse feedback at least from government experts who specialized in hard power dimensions of international relations.

Keeping these impressionistic contours of the broader context in mind, how important was damage limitation from the perspective of German governments with respect to the credibility of U.S. extended nuclear deterrence? In the absence of relevant evidence and insights into German government perspectives, the following points are noteworthy.

First, leaving public political rhetoric even of some senior decisionmakers aside, no German government appears to have seriously attempted to urge a categorical change in U.S. nuclear strategy, including a no-first-use declaratory policy or a non-reciprocal downsizing of U.S. strategic forces, including possible associated shifts in targeting and U.S. nuclear operations. This point rests on the premise that some general elements of related confidential debates would have become public. Hence the absence of such elements in the roughly three decades since 1990 matters, particularly also when the increasing importance of U.S. strategic forces for extended deterrence is considered in light of NATO’s relatively small and aging non-strategic nuclear capabilities based on forward-deployed U.S. B61 gravity bombs and dual capable aircraft (DCAs).

Second, it would be naïve to expect that Germany prioritized nuclear risk reduction via arms control to nuclear deterrence. German governments appear to have largely endorsed both the traditional foundations and also emerging new elements of U.S.

574 Brad Roberts, *On Theories of Victory, Red and Blue* (Livermore, CA: Center for Global Security Research, 2020), p. 11.

575 See, e.g., Helmut Schäfer, Edmund Stoiber, Horst Teltschik, Günter Verheugen and Antje Vollmer, *Dialog statt Eskalation*, *Frankfurter Allgemeine Zeitung* (December 4, 2018).

576 Joachim Krause, *Deutschlands strategische Blindheit*, *Frankfurter Allgemeine Zeitung* (September 14, 2023); cf. also Egon Bahr and Götz Neuneck, “Against Nuclearizing Europe,” *Survival* 57, no. 2 (2015), pp. 130-134.

577 Joachim Krause, “‘The Times They are a Changin’—Fundamental Structural Change in International Relations as a Challenge for Germany and Europe,” *SIRIUS – Zeitschrift für strategische Analysen* 1, no. 1 (2017), p. 8: “The European Security Order (...) was de facto destroyed in the spring of 2014.”

578 In a public speech given in 2017, the president of the Bundesnachrichtendienst (BND), Bruno Kahl, stated (in German, translated by the author): “Instead of a partner for European security, we now have a potential danger in Russia.” He added that Russia sought to “win back its leadership role on the European continent, weaken the EU, push back the USA, and drive a wedge between the two.” Speech Kahl, Hanns-Seidel-Stiftung (November 13, 2017). In May 2023, he publicly stated that the BND had not been strategically surprised by Russia’s attack against Ukraine in 2022. For many years, the BND was not heard to an extent that he could have been heard: Deutsches Forum Sicherheitspolitik, Gespräch mit B. Kahl (May 22, 2023). <https://www.youtube.com/watch?v=0523MXJz0c8>. Accessed July 19, 2024.

deterrence strategies—such as the announcement of a “New Triad,” the Conventional Prompt Strike program, the U.S. withdrawal from the ABM Treaty, the expansion of the Ground-Based Midcourse Defense (GMD) system in the United States, and the Integrated Air and Missile Defense (IAMD) in NATO. This does not mean that certain elements like strategic BMD were not received at least skeptically on the part of some. In fact, it might be misleading to expect that strands of government views on such issues were homogenous, stable, or internally consistent over time or that an operational perspective on the nuclear balance of power carried nearly as much weight as it did for most of the Cold War. But if the basic claim was not wrong that “changes in technology occurring today,” namely in the 21st century, “are making all countries’ arsenals less survivable than they were in the past,”⁵⁷⁹ then also the German government could very likely not but evaluate these changes and adaptations by the United States and other nuclear powers. Again, it is important to bear in mind that governments are not monoliths and that the whole notion of “strategic partnership” with Russia almost certainly dampened strategically relevant perspectives on deterrence. It is also an open question how coordinated the government’s positioning with respect to nuclear deterrence was and how much leadership attention there was over time.

A key point about all of this is this: At least at times the controversial concept was apparently influential in Berlin that U.S. extended nuclear deterrence could almost certainly function without a meaningful loss of security if the nuclear roles of forward-based B61s and DCAs in Europe were discontinued—even without reciprocal steps by Russia—and if the future reliance on U.S. strategic forces (and, potentially, U.S. non-strategic forces in sea-based configurations “external” to the European continent) became total. This concept was inconsistent with Germany’s traditional stance toward extended nuclear deterrence and seemed to reflect a larger point: After the Cold War, German specialists’ and policymakers’ perceptions of the requirements of U.S. extended deterrence had apparently changed so that, compared to the Cold War, it seemed less demanding for various reasons to sustain U.S. extended nuclear deterrence.⁵⁸⁰

Towards the end of the 2010s, the influence of the controversial concept had apparently declined sharply.⁵⁸¹ In parallel and related to it, the threat that Russia might offensively and coercively use nuclear weapons, especially non-strategic nuclear weapons, became more salient when the U.S. Nuclear Posture Review report of 2018 highlighted it. However, many public commentaries in Germany criticized or even

579 Keir A. Lieber and Daryl G. Press, “The New Era of Counterforce. Technological Change and the Future of Nuclear Deterrence,” *International Security* 41, no. 4 (2017), p. 16.

580 Andreas Lutsch, “Die nukleare Dimension von Deutschlands F-35-Entscheidung von 2022 in historischer Perspektive,” *SIRIUS – Zeitschrift für strategische Analysen* 7, no. 4 (2023), pp. 368-389.

581 Cf., e.g., the second keynote speech by Minister of Defense Annegret Kramp-Karrenbauer, University of the Bundeswehr Hamburg (November 17, 2020).

dismissed such views expressed in this NPR and by similar experts⁵⁸² for alleged threat inflation, fear mongering, and overreaction to Russia's behavior. The tone of such criticisms often conveyed the sense that the greater threat to strategic stability came from the United States, not Russia. But public commentaries cannot be equated with government views. It is probably safe to expect that the prevailing view in government saw it the other way around, no matter how strained the political climate in NATO and American-German relations became during the presidency of Donald Trump. Future scholars will have to evaluate how consecutive German governments viewed U.S. threat assessments, U.S. deterrence adaptations to address the specific threat of a potential limited coercive use of nuclear weapons by Russia, and how these issues in turn related to German government perceptions of the role of counterforce and damage limitation in U.S. deterrence strategy, including U.S. nuclear strategy.⁵⁸³

The shock of 2022 and Germany's proclaimed "Zeitenwende"

Though undeclared, Russia had practically been at war with Ukraine since 2014. But it was only when Russia directly attacked Ukraine on February 24, 2022, that most policymakers in Germany were shocked— perhaps also out of wishful thinking. This passionate mood was also widespread in many other countries around the world. The dramatic deterioration of the security situation in Europe caused by Russia's war revealed that many policymakers particularly also in Germany had over many years held on to grossly mistaken images of the character of the international system, of the requirements of deterrence, of the risks of refraining from sufficiently bolstering deterrence, and of the real-world significance of brute force, violence, military power, and nuclear weapons, particularly in Russia's conduct in its so-called "near abroad" and Europe more generally.

Three days after the attack, German Chancellor Olaf Scholz spoke of a "Zeitenwende." Thereby, he also settled the years-long debate about Germany's role in nuclear sharing by declaring that the country would procure F-35s also for this purpose.⁵⁸⁴ This was, in fact, the second basic decision by the Federal Republic to cooperate in NATO nuclear sharing. The first basic decision was made under

582 Cf., e.g., John K. Warden, *Limited Nuclear War: The 21st Century Challenge for the United States* (Livermore, CA: Center for Global Security Research, 2018); Elbridge Colby, "If You Want Peace, Prepare for Nuclear War," *Foreign Affairs* 97, no. 6 (2018), pp. 25-34.

583 That would also include German government perceptions of the following U.S. decisions and programs: the modernization of strategic and non-strategic nuclear forces; global conventional strike capabilities; missile defense programs and plans; the decision announced in 2010 to retire sea-based Tomahawk land-attack cruise missiles (TLAM-N) and reversals of this decision announced in 2018 and 2022; and the decision, announced in 2018, to introduce a low-yield version of the W76 warhead for TRIDENT D5 SLBMs. Currently, it is uncertain what the final U.S. position on the issue of a nuclear-armed sea-launched cruise missile (SLCM-N) will be: Congressional Research Service, Nuclear-Armed Sea-Launched Cruise Missile (SLCM-N), IF12084, version 5 (updated May 31, 2024).

584 Statement by Chancellor Scholz (February 27, 2022). <https://www.bundesregierung.de/breg-de/suche/regierungserklaerung-von-bundeskanzler-olaf-scholz-am-27-februar-2022-2008356>. Accessed July 19, 2024. Minister of Defense Kramp-Karrenbauer had called Russia's annexation of Crimea a "Zeitenwende": 3rd keynote speech by Minister Kramp-Karrenbauer, Bundeswehr Command and Staff College Hamburg (June 28, 2021).

Chancellor Konrad Adenauer in 1957. Other important decisions followed. For the first time since the end of the Cold War, collective defense was made the number one priority for the Armed Forces, based on a proclaimed goal of making the Bundeswehr “a cornerstone of conventional defense in Europe.” A related declared goal was to “strengthen air-defense capabilities within the NATO framework.”⁵⁸⁵ To do so, Germany decided to co-lead the “European Sky Shield Initiative.” And in July 2024, the United States and Germany declared that U.S. missiles for conventional long-range fires will be deployed in Germany starting in 2026.⁵⁸⁶

The increasingly shrill rhetoric of Russian leaders who issued a series of nuclear threats—and also the non-intervention by NATO in Russia’s war against Ukraine as well as the conditions-based Western approach of providing military assistance to Ukraine—appeared to indicate just how aware European governments were of their existential dependence on U.S. extended nuclear deterrence which may have helped deter Russian aggression and attacks against European NATO states in the context of the Russo-Ukrainian war. In strategic terms, it was a tectonic earthquake that Russia used nuclear weapons in a politically offensive way to shield its thus far rather effective attempts to redraw borders in Europe and annex Ukrainian territory. This also means that Russia irreversibly destroyed one important precondition for the willingness of Non-Nuclear-Weapon States at least in Europe to renounce national control of nuclear weapons, namely, the expectation that Nuclear-Weapon-States like Russia would “refrain (...) from the threat or use of force against the territorial integrity or political independence of any state” [Art. 2 (4) Charter of the United Nations].

Taken together, Germany and NATO may since 2022 have been more reliant on nuclear protection by the United States than ever since the end of the Cold War. And because of disparities between Russia and NATO in non-strategic nuclear weapons systems in Europe and because of the current size and composition of the non-strategic nuclear posture in NATO, U.S. extended nuclear deterrence largely depends on U.S. strategic forces.⁵⁸⁷ This, in turn, also highlights the crucial but currently unanswerable question how important damage limitation appeared to be from the perspective of German governments after the shock of 2022 with respect to the credibility of U.S. extended nuclear deterrence. It is remarkable to note what has apparently been absent thus far, namely, a new “grand débat” (R. Aron) in NATO about nuclear deterrence. This absence itself sends a message. After the shocks of 2022, European governments apparently continued to conclude that divisive nuclear debates, especially public ones, are to be avoided, that a serious and business-like treatment

585 NSS 2023, p. 32.

586 Joint Statement from United States and Germany on Long-Range Fires Deployment in Germany (July 10, 2024). <https://www.whitehouse.gov/briefing-room/statements-releases/2024/07/10/joint-statement-from-united-states-and-germany-on-long-range-fires-deployment-in-germany/>. Accessed July 19, 2024.

587 See also C. Robert Kehler, “Commanding Nuclear Forces,” in Charles Glaser, Austin Long, and Brian Radzinsky, eds., *Managing U.S. Nuclear Operations in the 21st Century*, p. 155: “Today’s triad also plays a more important role than it did during the Cold War in reassuring our allies and partners of our extended nuclear guarantee.”

of related issues is required, and that U.S. nuclear protection remains existentially important, which is why it needs adaptation as global strategic circumstances change in profound ways.

Some Expectations in Lieu of a Conclusion

How might German governments perceive the relevance of counterforce and damage limitation in U.S. deterrence strategy in the years to come under conditions of likely increasing tensions and competition between the United States, Russia, and China?

There is currently no real prospect for peaceful change in great power relations. Many expect at least intense great power rivalry, competition, and diffusely increasing likelihoods of dangerous crises, even if deterrence failures, more direct contests of will, or even wars involving great powers can be avoided—which is uncertain. Profound reinforcements in the geostrategic orientations of great powers continue to unfold. One of the most important trends points toward growing cooperation between China and Russia to challenge U.S.-led regional security orders. This includes risks of coordination between Russia and China and of “opportunistic aggression.”⁵⁸⁸ In addition, China’s efforts to expand its nuclear and conventional forces have been described as “explosive” and “breathtaking.”⁵⁸⁹

Under these rapidly changing conditions with profound short-term and long-term implications, counterforce and damage limitation in U.S. deterrence strategy may, once again, contribute significantly to deterrence and absence of war in the years to come. This also means that the ‘old’ issue of more direct and more specific assurance expectations on the part of U.S. allies not just in Europe, including Germany, but now also in Asia may well become much more important also from the perspectives of the highest political leaders. It is also noteworthy that thinking about implications of the two near-nuclear peer problem still has little traction in public discussions in Germany about deterrence.⁵⁹⁰

If we consider the vehement weight of the deeply rooted pattern of German behavior since the early 1960s and an expectedly small likelihood of pattern-related discontinuity plus glacier speed in NATO nuclear policies after 1990, an historically informed perspective would suggest the following: Under the novel conditions of an emerging two near-nuclear peer world materially reinforced and threat-calibrated U.S. commitments to a counterforce-oriented deterrence strategy will in the years to come—once again—very likely carry special weight to assure U.S. allies also

588 Hal Brands and Evan Braden Montgomery, “Opportunistic Aggression in the Twenty-first Century,” *Survival* 62, no. 4 (2020), pp. 157-182.

589 Statement by Adm. Charles Richard, U.S. STRATCOM commander, on August 10, 2021: Bill Geertz, “China building third missile field for hundreds of new ICBMs,” *The Washington Times* (August 12, 2021). He added: “frankly, that word ‘breathtaking’ may not be enough.”

590 One exception is Jonas Schneider and Oliver Thränert, “Chinas nukleare Aufrüstung betrifft auch Europa,” *SWP-Aktuell* Nr. 20 (March 2022). A few observers argued that the rise of China should be a reason for Germany to acquire a nuclear force: Maximilian Terhalle, “Europa muss Nuklearmacht werden,” *Frankfurter Allgemeine Zeitung* (May 31, 2022). For the same advocacy but without reference to a “China argument”: Interview with Christian Hacke, *Berliner Zeitung* (May 4-5, 2024).

in Europe and Asia. In the early 1960s, a crucial question was how U.S. extended nuclear deterrence could be maintained under novel conditions of strategic-nuclear “parity” or “essential equivalence” between the United States and the Soviet Union. Today, a crucial question is how U.S. extended nuclear deterrence can be maintained in the 2020s, 2030s and beyond under novel—and likely much more, if not too demanding—conditions of strategic-nuclear “parity” or “essential equivalence” between the United States, Russia, and China. At both times, these questions were explicitly or implicitly bound up with questions about the structure of the U.S.-led Western architecture of strategic deterrence in the medium and long run.

If we also consider how phlegmatic many European governments have over the last three decades dealt with, if not suppressed, questions about nuclear deterrence, it may seem to be unlikely that key European allies will expect changes in the U.S. strategic nuclear posture exceeding those which U.S. governments might then prefer, and potentially also so in some reference to assurance demands by those allies. Just like in the past, much will likely depend on U.S. behavior and on how European governments evaluate U.S. strategic adaptation processes in the context of the emerging global nuclear threat landscape. In addition, much will once again depend on how the U.S. exercises leadership and its remarkable “openness to allied influence.”⁵⁹¹ The United States will probably have to resist the natural inclination of impatience and of “soliciting the views we think are correct” when the task is also to listen to allies and what they say it is that assures them.⁵⁹² For their part, U.S. allies—especially also Germany—may well have to move out their comfort zone when thinking about nuclear deterrence, and they mostly have to trust the United States.

To borrow from the pointed, if not excessively exaggerated, statement by U.S. President Nixon quoted above, will effective assurance of U.S. allies in the future still require them to conclude that the United States remains “Number One” even in a world in which it faces two nuclear peers? This historically informed chapter may at first glance suggest that the basic answer is yes. But this sort of symbolic language may bury too many significant specifics which remain to be carefully examined before drawing general conclusions. What seems to be clear is that the United States “faces the most complex configuration of questions about nuclear weapons than it has ever faced since the onset of the nuclear age.”⁵⁹³ The same applies to U.S. allies. How deterrence will work in the future has to be fundamentally rethought. A huge array of technological innovations greatly enhances the degree of complexity, including artificial intelligence, improvements in intelligence capacities, digital command and control, novel systems like hypersonic missiles, and cyber capabilities. And these technologies link up with adapted old ones like strategic and non-strategic nuclear forces, air and

591 David S. Yost, “Assurance and US extended deterrence,” *International Affairs* 85, no. 4 (2009), p. 766.

592 M. Elaine Bunn, “Extending Deterrence and Assuring U.S. Allies,” in Charles Glaser, Austin Long, and Brian Radzinsky, eds., *Managing U.S. Nuclear Operations in the 21st Century*, p. 220.

593 Joint Prepared Statement by Eric S. Edelman and Franklin Miller, U.S. Senate Committee on Armed Forces, September 20, 2022, *NIPP IF*, no. 538 (November 10, 2022).

missile defense systems, and conventional strike systems. In addition, just like Cold War-style bipolar frameworks for analyzing nuclear balances of power have become anachronistic, the modus operandi of “pragmatic policy in the sense of reactive management”⁵⁹⁴—a modus which has been very popular after the Cold War—will not analytically or politically suffice. At least a sense of urgency and hype-avoiding, open-ended, systematic strategic assessments of the requirements of deterrence under the novel conditions of a two-nuclear-peer world—while taking into the account the irreplaceable role of the United States—are crucial in view of the transformative changes in the international system which are unfolding before our eyes.

594 Uwe Nerlich, “Möglichkeiten und Probleme einer Konstellationsanalyse als Grundlage künftiger sicherheitspolitischer Planung,” in Wolfgang Heydrich, Joachim Krause, Uwe Nerlich, Jürgen Nötzold, and Reinhard Rummel, eds., *Sicherheitspolitik Deutschlands: Neue Konstellationen, Risiken und Instrumente* (Baden-Baden: Nomos, 1992), p. 65. Translated by the author.

Counterforce and Countervalue Targeting in Soviet and Russian Nuclear Strategies

Mike Albertson

To provide some context for the U.S. debates on nuclear targeting strategy, this chapter will attempt to examine how the other side—in this case the Soviet Union and then Russia—has thought and continues to think about the same set of issues. This is not meant to be an exhaustive examination of Soviet and Russian nuclear strategy, but instead a short summary centered around a few central questions. How did the Soviets approach the subject of targeting within broader debates about geopolitical strategy, military doctrine, and nuclear operations? Did the Soviets and the Russians subscribe to the Western ideas of countervalue and counterforce? How did they describe their own targeting strategy? What did they target and why? How has Soviet and Russian thinking on targeting evolved over time, and where is the Russian targeting debate going next?

Soviet and Russian targeting strategy did not—and does not—fall cleanly into purely “counterforce” or “countervalue” bins as Western experts define them. In fact, these terms are not used at all by Soviets and Russians regarding their own approach, only to describe what they felt the United States was pursuing with its nuclear targeting strategy. Viewed simply, Soviet and Russian nuclear targeting was a means to an end, both in various regional theaters and worldwide. It was the method by which one could achieve a particular outcome-centered strategy using particular military operations against a particular opponent by damaging to requisite degrees a particular mix of political, military, and economic targets. Although the term comes with some controversy on whether such a strategy is offensively or defensively oriented in nature, it could be characterized as a “warfighting” targeting strategy designed to fight and win a nuclear war against an aggressive adversary seeking to do the same. While much has remained consistent, there have been some adaptations over time in response to evolving geopolitical threats, assessments of adversary capabilities and political will, and the military capabilities at hand to deter these threats. Soviet and Russian targeting has been an evolutionary process, with confidence in—and changes around—targeting strategies based more around their perceptions of their own capabilities and the intentions of their adversaries as opposed to specific force developments on the U.S. side.

The Soviet Approach to Targeting

From the earliest stages of the Soviet nuclear program, nuclear targeting was seen in terms of winning a war. Just as the Soviet Union had needed to fight and win a war against Nazi Germany in World War II, war now had to be fought and won under the new technological realities of two states armed with nuclear weapons. In 1957,

for example, two prominent Soviet military nuclear strategists stated that “wars are won only when the enemy’s will to resist is broken and that can only be broken, as the experience of history shows, when the armed forces of the enemy are destroyed. Therefore the objective of combat operations must be the destruction of the armed forces, and not strategic bombing of targets in the rear.”⁵⁹⁵ This focus on destroying the enemy’s will via its military combat potential was expanded in Marshal V.D. Sokolovskii’s widely read 1962 book *Military Strategy* to include targets related to economics and command and control. This can be seen in a selection of quotes from his section titled “Methods for Conducting Modern Warfare”:

The decisive weapon in modern warfare is the strategic nuclear weapon.⁵⁹⁶

Since the Soviet Armed Forces have at their disposal powerful long-range weapons, i.e. strategic nuclear-armed missiles, it is possible to act directly against the opponent’s strategic nuclear weapons, his economic base, and his system of governmental and military control.⁵⁹⁷

The military and political aims of a world war can be achieved by the annihilation of the enemy’s strategic weapons, by destruction of his economic base and armed forces in military theaters (ground and naval forces), and by the seizure of his territory.⁵⁹⁸

The targets of modern warfare will be the enemy’s strategic nuclear weapons, economy, system of governmental and military control, and obviously, troops and naval forces in military theaters. Moreover, primary targets will be located beyond military theaters and deep within enemy territory.⁵⁹⁹

Marshal N. Krylov, commander of the Soviet Strategic Rocket Forces (SRF) from 1963 to 1972, echoed Sokolovskii that the objective of a nuclear war should it need to be fought was “victory,” and that to achieve such an objective, the principal targets would be the enemy’s delivery systems, weapons storage, and fabrication sites; military installations; military industries; and centers of politico-military administration,

595 Raymond L. Garthoff, *Soviet Strategy in the Nuclear Age* (New York, NY: Praeger, 1958), pp. 72-73.

596 V.D. Sokolovskii, *Soviet Military Strategy*, Rand Corporation, R-416-PR (April 1963), p. 399.

597 Ibid., p. 400.

598 Ibid., p. 400.

599 Ibid., p. 402.

command, and control.⁶⁰⁰ This set of political, military, and economic targets has long been the historical basis of Soviet and Russian targeting strategy.

Having defined the overall list of targets necessary to destroy military capacity and enemy will, and thus to create the conditions necessary to achieve victory in war, the Soviets then centered their military strategies and nuclear operations around achieving favorable outcomes in defined theaters of military operations (TVDs) by damaging or destroying these targets. Operational principles guided targeting strategies, and William Lee provided a useful set of these principles taken from Soviet literature in his chapter on “Soviet Nuclear Targeting”:

- Destroy the most threatening enemy forces, that is, those enemy forces most capable of denying Soviet objectives.
- Select main “links” and nodes in target sets, for example, enemy national command authority.
- Do not destroy large areas or create radioactive deserts.
- Use minimum yield (“explosive power”) depending on target and delivery system characteristics; that is, the nuclear warhead delivered to a target should not drastically “overkill” the target.
- Targeting of population and all industry is unnecessarily destructive and not effective.
- Prepare to strike simultaneously in several TVDs.
- Prepare to strike “most important” targets twice.
- Political leadership should determine the relative weight of strikes in the various TVDs.⁶⁰¹

The concept of the TVD was important in nuclear targeting as a way of tailoring deterrence and warfighting to a particular opponent or region, as well as determining the proper mix of intercontinental and regional military capabilities needed in the Soviet force. A TVD was defined as the land or sea areas within the limits of which armed forces during war execute a single strategic mission.⁶⁰² Such TVDs included

600 Marshal N. Krylov, *Nedeliia* (Week), no. 36 (September 1967). As cited in William T. Lee, “Soviet Nuclear Targeting Strategy,” Demond Ball and Jeffrey Richelson, eds., *Strategic Nuclear Targeting* (Ithaca, NY: Cornell University Press, 1986), p. 86.

601 Lee, p. 97.

602 Lee, p. 88.

various theaters along the periphery of the Soviet Union in places like Europe and East Asia, as well as transoceanic TVDs such as North America. The execution of successful strategic operations in these TVDs was the basis for theater and strategic nuclear force requirements, and these operations varied depending on the intended objective.⁶⁰³ In the European TVD, the objective was to defeat and disarm NATO forces and occupy Western Europe with as little damage as possible.⁶⁰⁴ In the Far East, TVD objectives were likely more complex, with a potentially hostile China needing to be eliminated as a potential military threat, while Japan, like Western Europe, might be seen as critical to Soviet postattack recovery and thus might suffer less collateral damage.⁶⁰⁵ In the transoceanic TVD, with occupation unlikely, the goal was focused on destroying existing military forces and preventing the reconstitution of such forces.⁶⁰⁶

In all of the TVDs, Soviet literature indicated that nuclear targeting would be highly selective in terms of both the targets attacked and the damage levels inflicted.⁶⁰⁷ Categorizations were made in targeting as to whether particular targets would need to be annihilated, destroyed, or neutralized, depending on the political-military objectives of the operations in a particular TVD—and calculations were painstakingly done to ensure damage criteria objectives were achieved.⁶⁰⁸ Lee summarized Soviet damage criteria and objectives for hard and soft targets as follows:⁶⁰⁹

- Probability of kill: Applied to both hard targets and other elements of enemy nuclear forces, this may be translated into damage expectancy with the inclusion of calculations regarding system reliability.
- Damage expectancy: The Soviets sought high levels of damage expectancy (usually 0.9 or better).
- Requisite degree of overpressure (psi): Objectives for most soft targets were defined in terms of this metric. Two options were specified: “Neutralization” involved 10% to 30% coverage and “annihilation” at 50% to 70% coverage of the target area to achieve the requisite overpressure level.
- Damage levels: Three damage levels were specified for soft targets: light, moderate, and severe. Light damage required minor repair. Moderate damage

603 Lee, pp. 91-93.

604 Ibid.

605 Ibid.

606 Ibid.

607 General N.A. Lomov, ed., *Nauchnotekhnicheskii progress i revoliutsia v voennom dele* [Scientific technical progress and the revolution in military affairs] (Moscow, 1973), p. 130.

608 Ibid.

609 Lee, p. 99.

required major (capital) repair. Severe damage required replacement. The Soviets calculated that typical urban-industrial structures and equipment suffered moderate damage at 4.5 to 10 psi, and they considered this adequate for strategic targets purposes.

It was these mathematically-derived, operationally-focused targeting requirements which largely drove Soviet force development and composition decisions. This was particularly true regarding the necessity for achieving targeting objectives in the transoceanic TVD against the United States. Over the course of the Cold War arms competition, hard target kill capabilities were needed against increasingly more capable U.S. silos. Soviet intercontinental ballistic missiles (ICBMs), the backbone of the Soviet nuclear triad, required both improved accuracy, increased survivability through hardened silos and road- and rail-mobile launcher configurations, and multiple independently targetable reentry vehicles (MIRVs) to meet Soviet damage objectives. The transoceanic TVD example serves as the basis of an overall argument that Soviet strategic nuclear forces were sized to meet a particular targeting strategy vis-a-vis a specific set of targets, primarily in the transoceanic TVD but also in some cases against particular regions.

There were often disconnects in Western perceptions of Soviet targeting requirements and the numbers of Soviet nuclear forces. Based on U.S. perceptions, Soviet force numbers were often higher than required merely to meet stated targeting requirements, which suggested that Soviet leadership was seeking a qualitative or quantitative coercive advantage over the United States. This gap between what was seemingly required and what was being planned or developed was the basis for the debates about U.S. “windows of vulnerability” on one side and unnecessary and costly arms racing on the other. This discrepancy can be boiled down to fairly simple factors, however. The Soviets oversized their forces based on the allowances in their mathematical targeting calculations for important perceived metrics such as scenario uncertainties, system failure estimates, the need for potential simultaneity in multiple TVDs, and the correlating need for a large strategic reserve to account for unforeseen worst-case scenarios. Some margin of error in terms of numbers was seen as required, given the many complexities and uncertainties in Soviet targeting.

It is this Soviet approach to nuclear targeting which largely came to serve as the foundation for current Russian thinking on nuclear targeting. This foundation has always included a mix of what Western experts call “counterforce” and “countervalue” targets, as summarized in a declassified 1973 CIA study titled “Soviet Nuclear Doctrine: Concepts of Intercontinental and Theater War”:

Both counterforce and countervalue targets are incorporated in Soviet planning. The basic targets are identified as missile launch sites, nuclear weapons production and storage facilities, other military installations, systems for controlling or supporting strategic forces,

and military-industrial and administrative centers. Explicit references to the destruction of enemy populations, as such, are notably omitted from available Soviet listings of strategic targets. The list obviously implies, however, the directing targeting of major American cities and therefore massive civilian fatalities.⁶¹⁰

A few points can be highlighted in summary. First, Soviet nuclear force composition was designed around meeting targeting objectives against hard and soft targets in all TVDs, consistent with the overall nuclear strategy. Second, nuclear targeting was neither purely “counterforce” (i.e., military forces) or “countervalue” (i.e., population centers) as the West defines it, but a strategy consistent with a larger objective of how to potentially fight and “win” a nuclear war if necessary. Third, nuclear targeting showed remarkable continuity over time, despite major technological and force developments on either side over the course of the Cold War. Fourth, the force composition of the other side was important, but it was only one component in the equation. Targeting objectives needed to be met against a host of political, economic, and military targets, and much depended on what Soviet leadership saw as necessary to achieve particular objectives at particular moments against particular targets. Finally, Soviet agreement in arms control negotiations regarding limitations or reductions had to be grounded in a high confidence assessment that military requirements could still be achieved against desired nuclear targeting objectives.

The Russian “Window of Vulnerability” of the 1990s and early 2000s

The 1990s through the early 2000s were a time of transition in Russian nuclear targeting. The military performance by the United States and its allies brought to Russian attention the advanced conventional military capabilities of its primary geopolitical rival. The subsequent collapse of the Soviet Union heightened the military disparity by leaps and bounds. This problem was quickly addressed in Russian high-level policy documents. The November 1993 “The Basic Provisions of the Military Doctrine of the Russian Federation” had to rhetorically balance out the political desire for cooperative efforts at arms control and non-proliferation with the sharp competitive reminder to the military that the Russian armed forces must maintain “the composition and status of the strategic nuclear forces at a level ensuring guaranteed intended damage to the aggressor in any conditions of the situation.”⁶¹¹ Likewise, the Russian military industrial complex was tasked with “the maintenance of the entire complex of strategic weapons at a level ensuring the security of the Russian Federation and its allies, strategic stability, and deterrence of nuclear and

610 Central Intelligence Agency, “Soviet Nuclear Doctrine: Concepts of Intercontinental and Theater War” (June 1973), pp. 7-8. https://www.cia.gov/readingroom/docs/DOC_0000268107.pdf. Accessed April 12, 2024.

611 Russian Federation, “The Basic Provisions of the Military Doctrine of the Russian Federation” (1993). <https://nuke.fas.org/guide/russia/doctrine/russia-mil-doc.html>. Accessed April 12, 2024.

conventional wars, as well as nuclear security.”⁶¹² In short, the signal was sent that legacy nuclear targeting requirements regarding “guaranteed intended damage” would need to continue to be met under all circumstances.

While potential changes obviously needed to be made quickly, longer-term options also needed to be explored. Given the conventional imbalance, nuclear targeting would need to come to the forefront. On November 4, 1993 the Russian Defense Minister Gen. Pavel Grachev announced that Russia would no longer be bound by the Soviet pledge not to use nuclear weapons first.⁶¹³ The central Russian military science question for the 1990s then became: if Russia would potentially need to use nuclear weapons first against a conventionally more powerful adversary, either to deter such an opponent or even potentially defeat such an opponent on terms favorable to Russia, how should it think about this problem in terms of its strategy, doctrine, capabilities, operations, and targeting?

Some of these factors were relatively inflexible. The Russian military had what it had inherited from the Soviet Union, and the defense industrial complex had little ability to provide it with more either in terms of new conventional or new nuclear capabilities.⁶¹⁴ On the positive side, the Russians still possessed a robust Soviet legacy arsenal in the form of a large and diverse strategic triad and a considerable variety of theater nuclear-capable systems.⁶¹⁵ The reconsolidation of the Soviet nuclear arsenal back onto Russian soil would add some numbers back. On the negative side, these capabilities if not adequately replaced and if not adequately maintained and trained would atrophy significantly over the coming years.⁶¹⁶ Strategic arms control treaties like START I and INF and political agreements like the Presidential Nuclear Initiatives would reduce numbers and types of strategic and tactical systems. As in the Cold War, remaining Russian capabilities were then stacked against the assessed will and capabilities of the adversary to assess whether significant changes needed to be made to operations and targeting to achieve desired political and military objectives.

Strategy and doctrine could and would need to be changed to adapt to new realities. As the 1990s proceeded, the massive underperformance of the Russian military in places like Chechnya stood in alarming contrast to the display of U.S. conventional capabilities in the Middle East and the Balkans. As has been well documented elsewhere, during this period overall Russian strategy and doctrine came

612 Ibid.

613 Serge Schmemmann, “Russia Drops Pledge of No First Use of Atom Arms,” *The New York Times* (November 4, 1993). <https://www.nytimes.com/1993/11/04/world/russia-drops-pledge-of-no-first-use-of-atom-arms.html>. Accessed April 12, 2024.

614 Mark Schneider, “The Nuclear Forces and Doctrine of the Russian Federation,” *National Institute Press* (2006). <https://nipp.org/wp-content/uploads/2021/05/Russian-nuclear-doctrine-NSF-for-print.pdf>. Accessed May 7, 2024.

615 For a snapshot in time, see for example “Russian Nuclear Forces, 2000,” *Bulletin of the Atomic Scientists* 56, no. 4 (July 2000), pp. 70-71. <https://journals.sagepub.com/doi/pdf/10.2968/056004017>. Accessed May 7, 2024.

616 Joseph Cirincione, “Incredible Shrinking Russia’s Nuclear Force,” *Carnegie Endowment for International Peace* (May 10, 2000). <https://carnegieendowment.org/2000/05/31/incredible-shrinking-russian-nuclear-force-pub-299>. Accessed May 7, 2024.

to rely more on nuclear weapons to achieve its political and military objectives.⁶¹⁷ The point needed to be made clearly and openly that adversary conventional use could trigger a Russian nuclear response. By 2000, Russian military doctrine had expanded nuclear first use beyond simply “in case of a threat to the existence of the Russian Federation” as in the 1993 and 1997 doctrines to now include situations “in response to large-scale aggression utilizing conventional weapons in situations critical to the national security of the Russian Federation.”⁶¹⁸

Targeting selection would also need to be refined to meet the new realities, although overall targeting strategies largely remained consistent with Soviet foundations. Critical formations of enemy forces, still needed to be identified and targeted. The transoceanic TVD still needed to be covered. The key emerging challenge with targeting enemy forces centered on the types of conventional strike assets on display in 1990s warfare, primarily air and naval units armed with conventional precision guided munitions. Emerging capabilities such as missile defenses and domains like space and cyber needed to be factored in, as did the lowered reliability of Soviet legacy systems as they approached the end of their service lives. Main links and nodes still needed to be identified, and this was particularly true in both NATO and the Far East where conventional disadvantages were most stark. Overkill and over-destruction were to be avoided, as Russian forces had less margin for waste in terms of meeting their intended targeting sets. The same mathematical calculations could be applied for achieving the desired level of damage against either hard or soft targets.

Strategic operations—defined as “coordinated tasks, strikes, operations, and combat actions carried out in a unified scheme and plan to achieve strategic goals”—were modified and refined accordingly.⁶¹⁹ Under the Soviet system, there were “two global operations: operation of the strategic nuclear forces and the strategic operation on countering an adversary aerospace attack; and five types of operations at the TVD: strategic offensive (counteroffensive) operations in the continental theater of operations, strategic defensive operations in the continental theater of operations, strategic operations in the oceanic theater of operations, as well as strategic air and air defense operations in the theater of operations.”⁶²⁰ These were used at the

617 See for example, Elbridge Colby, “Russia’s Evolving Nuclear Doctrine and its Implications,” Fondation pour la Recherche Stratégique (January 16, 2016). [https://www.frstrategie.org/en/publications/notes/russias-evolving-nuclear-doctrine-implications-2016#:~:text=An%20influential%202003%20official%20document,\(or\)%20nuclear%20weapons.%E2%80%9D](https://www.frstrategie.org/en/publications/notes/russias-evolving-nuclear-doctrine-implications-2016#:~:text=An%20influential%202003%20official%20document,(or)%20nuclear%20weapons.%E2%80%9D). Accessed May 7, 2024.

618 Arms Control Today, “Russia’s Military Doctrine.” <https://www.armscontrol.org/act/2000-05/russias-military-doctrine#:~:text=Whereas%20the%201997%20concept%20allowed,national%20security%20of%20the%20Russian>. Accessed April 12, 2024.

619 Michael Kofman et al., “Russian Military Strategy: Core Tenets and Operational Concepts,” Center for Naval Analyses (August 2021). <https://www.cna.org/reports/2021/08/Russian-Military-Strategy-Core-Tenets-and-Operational-Concepts.pdf>, p. ii. Accessed May 7, 2024.

620 O.N. Ostapenko, S.V. Baushev, and I.V. Morozov, “Information-space support of RF armed forces groupings,” Информационно-Космическое Обеспечение Группировок Войск (Сил) ВС РФ (St Petersburg, 2012), pp. 66-67.

operational-strategic level to distinguish between the operation of the Strategic Rocket Forces, the operation of strategic aviation, the operation of the strategic navy, front and naval operations, air and anti-aircraft operations, large amphibious, air-sea, amphibious and amphibious operations, and space and anti-space operations.⁶²¹

Given qualitative and quantitative limitations, Russian forces needed to be better combined and integrated to best effect, to determine who would do what against what kinds of targets at what point in the crisis or conflict. Strategic operations likewise needed to evolve accordingly to focus on the primary missions. Soviet operations were exercised and refined the 1990s and 2000s to focus on the new primary mission sets: theater military operations, aerospace defense from enemy attack, the destruction of key enemy nodes, and strategic nuclear operations. These came to be termed respectively by the Russians as strategic operation in the theater of military operations (SOTMO), a strategic aerospace operation (SAO), a strategic operation for the destruction of critically important targets (SODCIT), and operation of the strategic nuclear forces (OSNF) which later became strategic operation of nuclear forces (SONF).⁶²² New capabilities were folded into these operations alongside nuclear.

Was the nuclear targeting approach underlying these strategic operations different from the Soviet past? The key lies in the increased Russian focus on the idea of “unacceptable damage,” which would be a major intellectual focus of Russian military thinking in the 1990s and early 2000s as analysts grappled with Russian nuclear atrophy and conventional weakness.⁶²³ “Unacceptable damage,” of course, was not a new term, with the requirement to be able to inflict unacceptable damage on a potential adversary being an underpinning of nuclear deterrence throughout the Cold War. The novelty here was the Russian obsession with determining, calculating, and assessing the precise details of this term in the context of the new security environment given their own capabilities (nuclear, conventional, and non-kinetic) with the same capabilities of their potential adversary. The focus became on how to reach the desired threshold of unacceptable damage using the lowest Russian numbers and damage levels possible. As Nikolai Sokov explained, traditional unacceptable damage came to be replaced by the idea of “tailored damage” or *zadannyi ushcherb*, a predetermined, calibrated level of damage designed to be subjectively perceived as unacceptable by an adversary.⁶²⁴

621 Ibid..

622 Michael Kofman, Anya Fink, Dmitry Gorenburg, Mary Chesnut, Jeffrey Edmonds, and Julian Waller, *Russian Military Strategy: Core Tenets and Operational Concepts, DRM-2021-U-029755-Final* (August 2021). <https://www.cna.org/reports/2021/08/Russian-Military-Strategy-Core-Tenets-and-Operational-Concepts.pdf>. Accessed April 12, 2024.

623 Nikolai Sokov, “Russia Clarifies its Nuclear Deterrence Policy,” Vienna Center for Disarmament and Non-Proliferation (June 3, 2020). <https://vcdnp.org/russia-clarifies-its-nuclear-deterrence-policy/>. Accessed April 12, 2024.

624 Nikolai Sokov, “Russian Nuclear Strategy: Background, Current Status, Future,” Middlebury Institute of International Studies (June 2016). <https://www.nonproliferation.org/wp-content/uploads/2016/06/Nikolai-Sokov-Russian-Nuclear-Strategy.pdf>. Accessed May 7, 2024.

Several interesting conclusions can be drawn here in reference to a discussion on targeting, many of which would support the idea that the massive disruptions in the 1990s forced the Russian military to shift to a more countervalue strategy in the transoceanic and theater TVDs focused on dealing unacceptable damage to the United States and its allies. First, Russia had doubts about whether its forces could cover the entire counterforce target set it now faced. Its nuclear forces were decreasing. Economic and industrial realities limited their ability to get more forces or to improve the operational readiness of the survivable forces in the existing force. Fewer Russian warheads could be counted on to survive to target given Russian estimates about U.S. prompt strike and missile defense capabilities. Risk thus needed to be taken in identifying the most important targets which could be guaranteed to be hit in the worst case scenarios.

Second, Russian military thinkers drew strong conclusions from observing the Western way of war in the 1990s and 2000s. The United States was seen to be extremely loss averse in regards to its people and economies. If targets were to be chosen that would get the enemy's attention, and unacceptable damage needed to be seen through the lens of the bare minimum required, there was an increased focus on softer targets with high political impact, such as a focus on the destruction of cities and major economic and industrial nodes.⁶²⁵ Softer targets also required less in terms of damage calculations or specified warheads. Any nuclear warhead simply needed to get through and get close to target.

Finally, there was a strong Russian military science focus on precisely calculating tailored “unacceptable damage” levels, particularly the estimation of intended political effects (i.e., “how to sober but not enrage an adversary” or “to terminate the conflict on terms favorable to Russia”) using nuclear versus conventional attacks at particular times against particular targets. Whereas damage effects could be precisely estimated, this question of adversary political resolve proved to be filled with many more uncertainties.⁶²⁶

In summary, while this period saw a great degree of continuity with the Soviet legacy, it also saw a shift in a more countervalue direction by the Russian military. Looking at the other side on paper, Western analysts believed Russia had the nuclear forces to perform its same counterforce-dominant targeting missions in both regional and transoceanic theaters. But on deeper analysis, Russian military thinkers had serious doubts when looking through their side of the lens at their own forces.⁶²⁷ Aging legacy systems may not function. They might be destroyed on the

625 E.V. Miasnikov, “The Future of Russia’s Strategic Nuclear Forces Discussions and Arguments,” Moscow Institute of Physics and Technology (1995). https://spp.fas.org/eprint/snf0322.htm#N_6_. Accessed April 12, 2024.

626 Michael Kofman, Anya Fink, Dmitry Gorenburg, Mary Chesnut, Jeffrey Edmonds, and Julian Waller, *Russian Military Strategy: Core Tenets and Operational Concepts*, CNA, *DRM-2021-U-029755-Final* (August 2021). <https://www.cna.org/reports/2021/08/Russian-Military-Strategy-Core-Tenets-and-Operational-Concepts.pdf>. Accessed April 12, 2024.

627 Alexis Blanc et al., “The Russian General Staff: Understanding the Military’s Decisionmaking Role in a ‘Besieged Fortress,’” Rand Corporation (March 22, 2023). https://www.rand.org/pubs/research_reports/RRA1233-7.html. Accessed May 7, 2024.

ground by conventional strikes. They might be shot out of the air by missile defenses. Only a small number of warheads might get through. Western analysts by the mid-2000s were coming to the same conclusion, as seen in this excerpt from a 2006 *International Security* article titled “The End of Mad? The Nuclear Dimension of U.S. Primacy”:

Today the United States stands on the verge of attaining nuclear primacy vis-à-vis its plausible great power adversaries. For the first time in decades, it could conceivably disarm the long-range nuclear arsenals of Russia or China with a nuclear first strike. A preemptive attack on an alerted Russian nuclear arsenal would still likely fail, but a surprise attack at peacetime alert levels would have a reasonable chance of success...To the extent that great power peace stems from the pacifying effects of nuclear weapons, it currently rests on a shaky foundation.⁶²⁸

Whether this scenario or this analysis was accurate or not, this perception of vulnerability shaped Russian nuclear thinking regarding targeting in important ways. If this worst-case scenario was in fact the case, the question became: What should Russia target to achieve its intended political and military objectives? The focus then turned to “unacceptable damage,” and the targets most likely to be available and require little margins for error in terms of calculations were soft targets of an economic and political nature. Given the non-contact Western way of war, these targets could be expected to cause the most pain at the lowest potential cost. All of this, however, involved a great degree of risk and uncertainty. It was not a comfortable situation for the Russian military, and the Russian nuclear modernization program was intent on putting the nuclear forces back into a more solid footing vis-à-vis its historical targeting requirements.

Where Does Russian Nuclear Targeting Go From Here?

Given the strides made in the 2010s up to today, the Russian strategic modernization program can be judged to have been a success. Russia replaced the vast majority of its Soviet legacy systems with new systems, and Russian political and defense leadership highlights every year the increasing percentage of its modernized nuclear forces. Its nuclear and missile defense industries have been revitalized; both have hot production lines at work, as well as innovative concepts under development. So-called novel nuclear-armed systems have been announced, and are all in some stages of development or production; some will be fielded, while others are likely to be discarded for technological and economic reasons. But where does this success leave

628 Keir A. Lieber and Darryl J. Press, “The End of MAD? The Nuclear Dimension of U.S. Primacy,” *International Security* 30, no. 4 (Spring 2006), p. 7044.

the Russians with regards to their nuclear targeting? Are they now as comfortable as they were in the Soviet period? Are they as worried as they were in the 1990s and early 2000s? The answer lies somewhere in between, and it depends on whether one looks through the lens of military planning or political goals.

The success of the Russian force modernization program has probably led military planners to shift back to a more Soviet-based targeting approach from the elusive search for the bare minimum unacceptable damage of the 1990s and early 2000s. Russia now has a modernized and diversified strategic arsenal to deal with targets in the transoceanic TVD.⁶²⁹ So-called novel systems provide a technological hedge against uncertainties related to survivability and retaliation in the face of advanced adversary conventional strike and missile defense capabilities. Most of its new platforms have a dual-capable mission and the tactical nuclear weapons to support such a mission in the relevant regional theaters.⁶³⁰ Conventional strike systems can fulfill some targeting missions. While Russian military thinkers recognize that the window of maximum vulnerability or perceived U.S. nuclear primacy is likely past, they have a deep belief it could re-emerge at any moment due to technological or geopolitical shifts. In their view, Russia must thus continue to evaluate their own nuclear forces, posture, operations, and targeting in the face of these emerged and anticipated challenges. But from a purely military standpoint—looking at the intended missions, the requisite operations, and the available and anticipated forces—targeting would seem to fit with the Soviet legacy approach of destroying the adversary’s most threatening forces, its critical nodes of control, and its economic base for waging war.⁶³¹

This military evolution has taken place quietly in the background, however. At the forefront of the stage is Russian political nuclear rhetoric, which has become more strident in the wake of Russia’s invasion of Ukraine. While the Russian military has adapted its nuclear forces to the new geopolitical and technological realities, the Russian political leadership continues to see deterrence value or mere shock value in overtly threatening Western populations with unacceptable damage in the form of nuclear weapons. Putin has stated that the U.S. nuclear bombing of Hiroshima and Nagasaki had created a precedent, and in the description of one Western analyst, “embellished his statements on the nuclear subject with messianic overtones.”⁶³² Dmitry Morozov, editor-in-chief of *Novaya Gazeta*, a Russian newspaper, commented in an interview on the nuclear rhetoric on Russian television programming: “on Russian television over the past two weeks they have said 200 times that... it is possible...

629 Hans Kristensen et al., “Russian Nuclear Weapons, 2024” *Bulletin of the Atomic Scientists* (March 7, 2024). <https://thebulletin.org/premium/2024-03/russian-nuclear-weapons-2024/>. Accessed April 12, 2024.

630 Ibid.

631 William Alberque, “Russian Military Thought and Doctrine Related to Non-Strategic Nuclear Weapons: Change and Continuity,” IISS (January 2024). https://www.iiss.org/globalassets/media-library---content--migration/files/research-papers/2024/01/iiss_russian-military-thought-and-doctrine-related-to-non-strategic-nuclear-weapons_012024.pdf. Accessed May 7, 2024.

632 Hanna Nottle, “The West Cannot Cure Russia’s Nuclear Fever,” *War on the Rocks* (July 18, 2023). <https://warontherocks.com/2023/07/the-west-cannot-cure-russias-nuclear-fever/>. Accessed April 12, 2024.

and how they should use nuclear weapons. Two hundred times. For two weeks. This already looks like an advertisement for dog food.”⁶³³ As Western experts have argued in response to Russian video depictions of warheads raining down on places like Florida: “This isn’t a warfighting strategy, to have a video of attacking Florida. This is a message. The symbolism is in the video itself. It’s a rhetorical flourish.”⁶³⁴

Many have asked what comes next for Russia and its nuclear forces in the wake of the Ukraine war. Many have argued in some form that Russia will be forced to double down on its nuclear forces given its demonstrated conventional weaknesses, as it was forced to in the 1990s.⁶³⁵ Doubling down could take a variety of different forms on the military side, whether qualitative or quantitative growth in the forces—particularly non-strategic nuclear forces. It may involve changes in strategy, doctrine, and operations to increase reliance on nuclear weapons at earlier stages of the conflict. This doubling down could include “increased prominence” on the political side either through even more nuclear rhetoric and posturing.⁶³⁶

A more complex answer would be an expectation of greater tension and nuclear debate between Russian military officials, think tank experts, and political leadership as the nuclear lessons learned from Ukraine are digested and processed. This debate on whether Russia is prepared to use nuclear weapons to best effect has already spilled out into the open in the middle of last year in the Russian nuclear expert community, with Putin himself weighing in on the question at the plenary session of the 2023 St. Petersburg International Economic Forum.⁶³⁷ At its heart is a divide between communities and generations. The military planners will likely remain grounded in its Soviet legacy approach regarding targeting: a quiet foundation based on mathematical calculations of force balances and damage criteria against a historical listing of targets. Military theorists will continue to explore the hard questions and to attempt to calculate the inherently uncalculatable, which includes factors such as enemy will, proscribed dosage, escalation control, and minimum levels of unacceptable damage.

The greater wild card is Russian political thinking on nuclear weapons, particularly as those with experiences of the close nuclear calls of the Cold War and the environmental damages of Chernobyl fade from the scene. Much has been invested

633 The Moscow Times, “Дмитрий Муратов: «В России будет государственный переворот без свержения власти»” (June 6, 2023). <https://www.moscowtimes.ru/2023/06/21/dmitrii-muratov-v-rossii-budet-gosudarstvennii-perevorot-bez-sverzheniya-vlasti-a46685>. Accessed April 12, 2024.

634 BBC, “Why would Putin want to nuke Florida?” (March 1, 2018). <https://www.bbc.com/news/world-us-canada-43248794>. Accessed April 12, 2024.

635 Michael Kofman et al., “Assessing Russian State Capacity to Develop and Deploy Advanced Military Technology,” CNAS (October 2022). <https://www.cnas.org/publications/reports/assessing-russian-state-capacity-to-develop-and-deploy-advanced-military-technology>. Accessed April 12, 2024.

636 Nicholas Lokker and Heli Hautala, “Russia Won’t Sit Idly by After Finland and Sweden Join NATO,” War on the Rocks (March 30, 2023). <https://warontherocks.com/2023/03/russia-wont-sit-idly-by-after-finland-and-sweden-join-nato/>. Accessed April 12, 2024.

637 Andrey Baklitskiy, “What We Learned from Recent Calls for a Russian Nuclear Attack,” Carnegie Endowment for International Peace (July 20, 2023). <https://carnegieendowment.org/politika/90232>. Accessed April 12, 2024.

in restoring the Russian nuclear arsenal. It remains one of the main geopolitical tools the Kremlin has to deter and coerce, where Putin can point and say “We are ahead of you” or “We have these, now that I have your attention, listen to me when I speak” to the West. And yet, as one expert put it succinctly, “the Russian leadership is obviously struggling to find a way in which nuclear threats could strengthen its position in Ukraine and give it an edge in the confrontation with the West.”⁶³⁸ For all of the time, money, and energy spent on nuclear weapons, they cannot solve all of Russia’s self-created political and military problems.

Russia has the capabilities and the strategic operations to fulfill their military nuclear targeting needs against whatever targets are selected. The question will be on how Russian political leadership will use nuclear threats against particular targets—likely to be countervalue—to achieve its desired geopolitical aims. This is a debate of Moscow’s own making. Too much nuclear rhetoric risks being seen as crying wolf and having intended audiences lose the signal in the noise or tune out entirely. On the other hand, too few reminders of Russia’s nuclear capabilities poses the risk of being overlooked like in the 1990s or backed into an uncomfortable corner with few other options. Nevertheless, this mixture of military planning and political risk-taking will continue to impact Russian thinking about nuclear targeting moving forward.

⁶³⁸ Ibid.

Counterforce and Deterrence in the Indo-Pacific

The Soft Side of Superiority: Damage Limitation and Qualitative Advantage in Future U.S.-China Crises

Benjamin Bahney and Braden Soper

With the prospect of China growing its nuclear arsenal to 1,500 weapons by 2035, the United States is now on a path to having two nuclear near-peer rivals in the foreseeable future. Policymakers are gripped with the question of how to prepare for this future, with the recent report by the Commission on the Nuclear Posture of the United States stating that the existing program for nuclear force modernization is “necessary but not sufficient” to compete with the projected future strategic forces of Russia and China.⁶³⁹ To arrive at a measure of “sufficiency” for future U.S. strategic forces, the first fundamental question we need to answer is: What is their purpose?

In an earlier essay in this volume, Greg Weaver argued that the U.S. arsenal has a number of deterrent purposes, from defending the homeland, to assurance of allies and preventing proliferation, and the deterrence of adversaries in regional contingencies. Perhaps the most challenging of these is deterring attacks on allies, either against a limited nuclear attack, or a large-scale conventional attack.

This is because in these cases where the United States is projecting power to support allies, Washington cannot credibly threaten a nuclear countervalue attack against a near-peer nuclear competitor, because doing so would put domestic cities and infrastructure at risk. Therefore, it is hard to imagine that nuclear superiority via a solely quantitative advantage—namely, having more nuclear weapons and delivery vehicles than the adversary—could yield much bargaining advantage early in a geopolitical crisis.

It follows that U.S. bargaining power is weakest in a geopolitical crisis when it is supporting allies, as adversaries will perceive its resolve to be relatively weaker, thereby emboldening their behavior in crisis. Therefore the balance of power, namely the relative size and composition of strategic forces, is most salient when the United States is protecting allies because these are the cases when challengers perceive that Washington’s stakes are lowest. To effectively bargain before and during a geopolitical crisis, U.S. policymakers will need to credibly use their counterforce threats—as well as the other levers of power—to keep the crisis contained to the region, and to compensate for their weaker hand.

Future U.S. crises with China are therefore likely to feature Washington making a combination of nuclear and non-nuclear counterforce threats. Each side would likely mobilize its strategic and conventional forces, while also demonstrating the ability to defend against attack. Because the United States cannot credibly threaten a nuclear countervalue attack, its options will be conventional, defensive in nature, and

⁶³⁹ Report by the Commission on the Strategic Posture of the United States (2023).

focused on the theater of the crisis. But how policymakers should balance brandishing nuclear and conventional counterforce weapons, as well as offensive versus defensive capabilities, is unclear. While analysts have written extensively on the value of offensive nuclear threats in crisis, there is much less literature about the value of non-nuclear counterforce threats and defenses.

This essay argues that the utility of both offensive and defensive threats in crisis bargaining—for coercion and dissuasion of major power nuclear peers—is the core metric of interest. If this is true, policymakers must consider both the quantitative and qualitative aspects of the nuclear weapons each side has, as well as each side’s ability to defend itself, in order to arrive at a conclusion to the question of “How much is enough?”

Nuclear Superiority: Hard Quantitative Advantage vs. “Soft” Qualitative Advantage

Evaluating qualitative approaches to nuclear advantage allows for policymakers to consider options that do not directly lead to an arms race spiral of fielding ever-increasing numbers of nuclear weapons, which occurred early in the Cold War. As a result, this essay divides the broad idea of “nuclear superiority” into two versions: a “hard” version which focuses solely on an advantage in the quantity of nuclear weapons, and a “soft” version that takes the quantity of nuclear weapons into account but focuses more on qualitative advantages that allow a nuclear power to effectively compete with two near peers under resource constraints. In fact, this soft version of superiority is the strategy that U.S. policymakers pursued late in the Cold War against the Soviet Union—quantitative limits (under the SALT treaty) with a number of significant qualitative advantages.⁶⁴⁰

As other authors in the volume have argued, China and North Korea are expanding the numbers of their strategic forces. Russia and China are also making qualitative improvements to their strategic forces, expanding their missile defenses, and improving counterforce capabilities. Indeed, China has begun to operate an initial capability that could enable it to launch its intercontinental ballistic missiles (ICBMs) while it is under attack (also known as launch under attack or LUA) to evade U.S. counterforce. China’s LUA system incorporates ground-based radars and space-based infrared satellites—similar to the United States’s longstanding capability. However, China reportedly only has three OPIR satellites as of the writing of this chapter in early 2024, meaning that their system likely has gaps in its coverage of the globe.⁶⁴¹ Both Russia and China are also developing their own missile defense and counterforce weapons, but the U.S. military has a significant advantage on this account. Most

640 Brendan Rittenhouse Green, *The Revolution that Failed* (Cambridge, MA: Cambridge University Press, 2020).

641 U.S. Department of Defense, *Military and Security Developments Involving the People’s Republic of China*, Annual Report to Congress (2023).

scholars have focused on the quantitative aspects of nuclear postures in crisis, so how much do these qualitative aspects matter?

To answer this question, we have recently completed work to model the impact of damage limitation capabilities on nuclear crisis bargaining in a regional contingency. To understand how this impacts bargaining in the current security environment, we link these bargaining game theory models with expected weapons exchange models. This is because weapons exchange models tell us how the powers would expect a conflict to unfold. Exchange models predict how much damage each side would both deliver to the other, and how much they would expect to incur in exchange. In such a crisis, each player will be weighing the balance of stakes (i.e., resolve) against the balance of power (the expected force exchange results). A separate paper develops and analyzes such a model using open source information about the future force balance by extending the work of Robert Powell and U.S. weapons exchange models with China developed by Wu Riqiang.⁶⁴² Here we summarize that work for policy audiences.

Damage Limitation and Nuclear Competition: A History

Analysts started considering the role of damage limitation in crisis bargaining in the early 1960s as the nuclear competition heated up between the United States and the Soviet Union. At that time, Albert Wohlstetter argued against other analysts that deterrence was not automatic, but rather that there was a “delicate balance of terror.” The balance, as he argued in his famous *Foreign Affairs* piece, was delicate because it is very hard to operate a survivable, offensive nuclear force that can reliably be delivered to target—especially when a hostile power is doing all that it can to prevent such an outcome. Furthermore, Wohlstetter said that each side’s capabilities to limit the other’s ability to deliver their weapons and do damage, are shrouded in secrecy, and hard to assess.⁶⁴³

As the size of the arsenals of the major powers have shrunk under time via the SALT, START, and New START treaties, and as damage limitation capabilities have become more advanced, this issue has become more salient to the nuclear balance. This is exemplified by much of the debate over damage limitation being on whether or not it is possible for one side to disarm the other in a “splendid first strike” or to prevail in a full nuclear exchange. Kier Lieber and Daryl Press argued nearly 20 years ago that the United States could potentially disarm the Russian nuclear force if it was caught at low alert levels.⁶⁴⁴ Matthew Kroenig followed this approach in his work on nuclear superiority, conducting exchange modeling to show that the United States could prevail

642 Benjamin Bahney and Braden Soper, “The Delicate Balance Redux: Nuclear Forces, Damage Limitation and Uncertainty in Future U.S.-China crises,” working paper (2024); Robert Powell, “Nuclear Deterrence Theory, Nuclear Proliferation, and National Missile Defense,” *International Security* (2003); Rachel Tecott and Andrew Halterman, “The Case for Campaign Analysis: A Method for Studying Military Operations,” *International Security* (2021); Wu Riqiang, “Living with Uncertainty: Modeling China’s Nuclear Survivability,” *International Security* (2020).

643 Albert Wohlstetter, “The Delicate Balance of Terror,” *Foreign Affairs* (1958).

644 Lieber and Press, “The End of MAD? The Nuclear Dimension of U.S. Primacy,” *International Security* (2006).

in a weapons exchange with the major powers.⁶⁴⁵ Wu Riqiang then showed in 2020 that China's arsenal was minimally survivable against the United States in a nuclear exchange, suggesting the need for additional Chinese weapons capability.⁶⁴⁶

But none of these studies were able to connect the expected combined offensive and defensive advantage in war with bargaining in a crisis, which presents key decision points for determining whether to back down or continue to advance towards a strategic weapons exchange. Here we assess how those combined advantages in the balance of power and resolve allow one side the ability to outbargain the other in a crisis. These crisis bargaining outcomes are in large part derived from each side's perceived ability to prevail if a nuclear exchange were to occur.

Crisis Bargaining and Nuclear Forces

What is crisis bargaining in the context of deterrence? Thomas Schelling made a groundbreaking contribution to deterrence theory when he argued that in a crisis between nuclear-armed states, existential threats lack credibility. This is because the cost of a failed crisis is a full nuclear exchange, meaning mass devastation and the likely end of the states in question. This is the credibility problem at the center of deterrence theory; the costs of nuclear war greatly outstrip the stakes in any potential crisis. However, nuclear weapons have not created an end to geopolitical conflict or crises, even between the major powers. So, Schelling argued, deterrence in a crisis is about running risks—in particular, risks that “leave something to chance.”⁶⁴⁷ It is through this otherwise illogical bargaining process that rival nuclear states may be able to outbargain each other. Schelling likened this dynamic to a game of chicken where two cars drive towards each other, where the winner is the player that runs a greater risk by staying the course and accepting the possibility of mutual annihilation.⁶⁴⁸

This logic of using strategic nuclear advantage for bargaining also means that these advantages should be a key driver for arms acquisition and arms control decisionmaking. Brendan Rittenhouse Green argues that the historical record reflects this, as late in the Cold War the major powers were still deeply concerned about the details of the nuclear balance, acting very much along the lines of Wohlstetter's Delicate Balance theory.⁶⁴⁹ During this period the United States sought to create doubt in the Soviets' minds that they could prevail in a nuclear exchange because the United States was targeting Soviet weapons with counterforce, and even sought to drive doubt into the Politburo's belief that their command and control systems would

645 Matthew Kroenig, *The Logic of American Nuclear Strategy* (New York, NY: Columbia Press, 2020); Matthew Kroenig, “Nuclear Superiority and the Balance of Resolve: Explaining Nuclear Crisis Outcomes,” *International Organization* (2013).

646 Wu Riqiang, “Living with Uncertainty: Modeling China's Nuclear Survivability,” *International Security* (2020).

647 Thomas Schelling, *Arms and Influence* (New Haven, CT: Yale University Press, 1966).

648 Thomas Schelling, *The Strategy of Conflict* (Cambridge, MA: Harvard University Press, 1960).

649 Brendan Rittenhouse Green, *The Revolution that Failed* (Cambridge, MA: Cambridge University Press, 2020).

work when needed.⁶⁵⁰ In turn, the Soviets tried to field mobile missiles that would evade other forms of U.S. counterforce, and they sought to field the “Dead Hand” or Perimeter system that could circumvent normal command and control channels if nuclear weapons detonations were detected in Russia.⁶⁵¹

Indeed, the historical record from the Cold War suggests that the details of the nuclear force balance and counterforce capabilities that were more qualitative in nature were the key focus of decisionmakers when making important decisions in arms control and weapons acquisition. But then how would these same capabilities fit into the calculus of the players in a nuclear crisis, if one were to occur in today’s security environment?

How Damage Limitation Fits In

Damage limitation capabilities like missile defenses and counterforce complicate Schelling’s concept of risk and mutual annihilation. Damage limitation complicates this calculus because it can differentially reduce the expected damage to one side in a nuclear exchange. Herman Kahn wrote in 1964 that the ability to prevail in nuclear war at a lower cost than the other side should have bargaining benefits at even low levels of crisis escalation.⁶⁵² Implicit to this is the idea that the weaker side will seek to avoid crises with the stronger side, or perhaps will seek to quit a crisis before things escalate. The weaker side should tend to be less risk accepting and the stronger side more risk accepting, all other things being equal. But key to bargaining are the players’ perceptions about each other’s resolve, as well as their capabilities to both deliver—and limit—damage.

The “hard” quantitative nuclear force balance of 2035 is somewhat foreseeable. China is growing its arsenal primarily by deploying hundreds of new ICBMs in large silo fields, as well as deploying new sea-launched ballistic missiles (SLBMs), and at the same time also developing air-launched ballistic missiles. Current U.S. Defense Department estimates are that China will exceed 1,500 weapons by 2035. By comparison, Russia and the United States have been bound to New START treaty limits of 1,550 deployed weapons, at least until the treaty sunsets in 2026. It is unknown whether and how Russia has changed its deployed nuclear forces since it stopped allowing New START inspections in 2023. Further, we do not have an estimate of how Russia plans to change over the long run. By comparison, the United States is modernizing its existing force, both in platforms and weapons, but not expanding quantitatively between now and 2035, when the controversial new nuclear submarine-launched cruise missile (SLCM-N) will begin to deploy. There are also

650 Brendan Rittenhouse Green and Austin Long, “The MAD that wasn’t there: Soviet Reactions to the Late Cold War Military Balance,” *Security Studies* (2017).

651 Ibid.

652 Herman Kahn, *On Escalation: Metaphors and Scenarios* (1965).

many uncertainties, however, about these forecasts, as one or another country might accelerate, falter, or alter its trajectory.

The “soft” side of the equation, incorporating qualitative differences to include damage limitation capabilities, is much murkier. Advances in computing and sensing over the past 30 years have driven the possibility of the major powers fielding highly capable new damage limitation capabilities.⁶⁵³ Damage limitation modalities include hardening, mobility, as well as various forms of precision-strike counterforce and missile defenses. While hardening was the primary means of damage limitation early in the Cold War, the competition has evolved. Today the United States’ means of limiting damage is almost entirely via counterforce—both nuclear and conventional—and layered missile defenses. As described in Austin Long’s chapter, the U.S.’s hard-kill counterforce capabilities were built up in the 1970s around multiple independent reentry vehicles (MIRV) and weapon accuracy, as well as anti-submarine warfare. The United States has also built up its layered missile defenses, including a host of land- and sea-based theater missile interceptors and 44 ground-based midcourse strategic interceptors deployed at Fort Greeley. In recent years, the U.S. Defense Department has announced that it plans to expand this layered missile defense posture to include “left of launch” options that include cyber, electronic warfare, and other capabilities.⁶⁵⁴

Russia and China have pursued similar directions in damage limitation, but the United States has been more successful. Russian missile defense capabilities are fairly limited with a nuclear-tipped interceptor protecting Moscow, but both Russia and China are expected to field some more significant missile defense capabilities by 2030. To varying degrees, both China and Russia have pursued hardened facilities to protect military leadership and weapon systems, as well as mobile missiles. Their ability to do counterforce is unknown, but it is generally presumed to be low.

Last, incentives for damage limitation likely vary widely between the United States and its major powers competitors. This factors into the bargaining balance. Many other chapters in this volume also describes the unique logic of U.S. damage limitation in extending deterrence to allies, namely that counter-value strategies would require putting the U.S. homeland at risk in a nuclear crisis that involves an ally or partner. Counterforce capabilities provide the United States room to threaten to escalate against strategic forces alone, forcing the burden of escalation onto red. With this in mind, we move to examine our study’s findings on the future U.S. balance with China and implications for sizing and balance across the U.S. strategic force mix.

Integrated Deterrence and the Future Strategic Balance

Our quantitative analysis mapped the current and future U.S.-China strategic force balance—and the resulting expected nuclear weapons exchanges (using Riqiang’s

653 Keir Lieber and Daryl Press, “The New Era in Counterforce: Technological Change and the Future of Nuclear Deterrence,” *International Security* (2017).

654 U.S. Department of Defense, “Left of Launch Declaratory Policy” (2018).

exchange model) to crisis bargaining outcomes under differing scenarios. This analysis evaluated both “symmetric stakes” crises where the United States and China have similar political stakes, as well as “asymmetric stakes” crises where perhaps the U.S.’s stakes are lower as it is supporting an East Asian ally or partner. In the asymmetric cases, China’s stakes in the crisis are perhaps a few times that of the United States’s, rather than say an order of magnitude greater. These values reflect the logic that the United States has more to lose if the status quo of the international order is altered, so Washington’s stakes in defending an ally should still be significant even if lower than the regional near-peer competitor.⁶⁵⁵ And secondly, they also reflect the logic that if the United States does not back up a treaty ally in a crisis, its other alliances could be called into question.⁶⁵⁶

The analysis also assumes that the United States will continue to maintain only 1,550 deployed weapons through 2035 and that Washington only can afford to threaten to use half of its arsenal (775 weapons) against China to maintain deterrence against Russia post-conflict. We make this as a simplifying assumption, but also one that is based upon historical precedent. In the late Cold War, U.S. policymakers developed a strategy of withholding significant quantities of weapons in planning for a conflict with the Soviet Union, as they realized they would need to maintain deterrence against China post-conflict.⁶⁵⁷ In this case we assume a 50/50 split only because China and Russia are moving close to parity in terms of deployed weapons. Of course, these assumptions could change if we become aware that Russia plans to significantly upload significant numbers of its stockpiled weapons into deployed units.

Readers should also fully grasp the assumptions our model makes about player behaviors, and how we represent the way the players would perceive a nuclear exchange to play out. First, our model assumes some uncertainty around both the balance of stakes and the balance of power. The players’ beliefs around these quantities are modeled as probability distributions, and it is assumed that the players know the distribution of each other’s stakes in crisis. Their actual stakes are drawn at random from their respective probability distributions so that each side’s real stakes are held as private information. Second, our model assumes some uncertainty around the efficacy of the players’ damage limitation capabilities, which we judge is likely reflective of reality. We also adopt Wu Riqiang’s exchange model assumptions, namely that the United States will threaten a first strike against China’s silos with a single shot probability of kill of 99.95%, and that U.S. ground-based interceptors (GBI)

655 Robert Jervis, *The Meaning of the Nuclear Revolution* (Ithaca, NY: Cornell University Press, 1989).

656 Brad Roberts, *On Theories of Victory: Red and Blue* (Livermore, CA: Center for Global Security Research, 2020).

657 Caitlin Talmadge, in Narang and Sagan, eds., *The Fragile Balance of Terror: Deterrence in the New Nuclear Age* (Ithaca, NY: Cornell University Press, 2023).

missile interceptors are only 25% effective per shot.⁶⁵⁸ Riqiang's model also predated the deployment of Chinese sea-based (and air-based) weapons, and we do not have a useful set of assumptions to be able take them into account in the Riqiang exchange model. So here we are forced to assume that the United States and its regional allies can take out these weapons conventionally, with a combination counter air or anti-submarine warfare capabilities. In general, these assumptions are fairly favorable to the U.S. position, so our findings should be taken as a best-case scenario for Washington.

Last, the analysis parameterized variables that will be important, but which we cannot quantify with certainty. China's damage limitation capabilities will evolve between now and 2035, but there are no good estimates of how good they will be. So our analysis assumed varying levels of Chinese damage limitation efficacy (namely, 10%, 50%, 30% ,and 70%). We ran cases with a perfectly effective Chinese LUA capability, meaning detecting all U.S. missiles with no false alarms, and without any LUA whatsoever. We also evaluated cases where the United States's stakes are symmetric with China's, and cases where China's stakes were four times that of the U.S.

The exchange analysis shows that indeed the United States's bargaining position with China will erode as we approach 2035 due to China's growing nuclear force. But most significant to bargaining outcomes is the performance of China's LUA capability. A perfectly effective LUA capability increases the amount of force China can deliver to the United States by roughly tenfold, as it allows them to launch their silo-based ICBMs before incoming U.S. missiles arrive. The bargaining balance of the future also depends heavily on how much counterforce capability the Chinese can field, with a 30% level of effectiveness becoming very significant to bargaining outcomes. We also find that U.S. resolve is critical to game outcomes, and keeping Washington's resolve fairly symmetric is a key factor which dictates crisis outcomes. If the United States can convince itself—and China's leaders—that East Asian crises will be high stakes for Washington, this benefits the U.S. and reduces requirements for strategic military capabilities.

Policy Implications for U.S. Strategic Forces

The United States government faces hard choices in the road ahead, facing a Russian military that may soon be free of the constraints of formal arms control agreements, and a Chinese strategic force approaching parity with the United States. Washington also needs to weigh the potential crisis and war-winning benefits of a larger strategic force posture against the costs and drawbacks in peacetime. In our analysis, while we should not discount the need to grow the U.S. deployed stockpile, the softer options for superiority should be the main direction of the U.S. future

658 See Tecott Metz and Halterman, "The Case for Campaign Analysis: A Method for Studying Military Operations," *International Security* (2021).

strategic posture. This is because the softer approaches to superiority improve U.S. bargaining outcomes without creating direct incentives for an arms race spiral.⁶⁵⁹

In our view, a “hard” competitive strategy primarily seeking to expand numbers of nuclear weapons is unlikely to be prudent, as an increase in fielded U.S. weapons could result in two times the number being fielded by the combination of Russia and China. This means each additional U.S. weapon would increase the long-term counterforce requirements for the U.S. nuclear force, rather than reducing them. While we do not reject the possibility of needing to upload additional weapons as China and Russia grow their arsenals, this is unlikely to be a successful competitive strategy.

A better set of long-term investments in the U.S. strategic forces of the future would involve softer, more qualitative improvements. First, increasing the survivability of nuclear platforms and improving nuclear weapon penetration will forestall the efficacy of prospective Chinese and Russian damage limitation, in anticipation of some such capabilities being fielded around 2030. Investments in more survivable U.S. weapons likely will only drive additional Chinese and Russian counterforce and missile defenses (vice nuclear weapons deployments), and only if the U.S. capabilities were discovered or revealed.

A second set of options revolve around improving U.S. missile defenses and counterforce. Our analysis suggests that even marginal improvements in damage limitation trades heavily against additional nuclear weapons capabilities in the bargaining balance.⁶⁶⁰ In fact, our analysis suggests that perhaps a 5-10% increase in damage limitation capability would be as valuable to the U.S. bargaining position as uploading hundreds additional nuclear weapons.

On missile defenses, the U.S. GBIs are quite costly, and their efficacy is more questionable against major powers like Russia and China. Ongoing qualitative missile defense investments in missile tracking and fire control capability from space, as well as a long-range discriminating radar, are sound as they enable better performance of extant or additional missile defense interceptors. But there are other future missile defense possibilities like boost phase interceptors or directed energy weapons, which while expensive could have a much deeper defensive capability than the GBIs. It is notable that the U.S. Missile Defense Agency has had a stagnant budget for nearly a decade; this is something that policymakers need to revisit in the new strategic context.

Both nuclear and conventional counterforce also remain appealing options. However, as additional nuclear weapons risk continued numerical competition on the part of Russia and China, more qualitative improvements like missile accuracy, the ability to target mobile missiles [like via ground moving target indicators (or GMTI) capability], and anti-submarine warfare capabilities can buy advantage in the emerging competition. Further, the United States already has a significant leg up in each of these areas.

659 See Kayse Jansen’s article in this volume for a full evaluation of the arms race spiral argument.

660 Bahney and Soper, pp. 45-51.

Some authors have bemoaned the United States's growth of these capabilities as a driver of arms racing between the major powers.⁶⁶¹ A recent article by Chinese security scholars highlighted the growth of U.S. antisubmarine warfare, GMTI and layered missile defenses as a threat to China's nuclear forces.⁶⁶² If China's leadership shares this view, these measures could provide effective asymmetric levers for crisis bargaining. Further, these qualitative improvements are hard to observe and measure, and hard for the adversary to plan against. This gives the United States flexibility in how to demonstrate these advantages, and it can do so at specific times where it is most valuable for coercion and minimizing arms racing.

A third set of soft options revolve around "left of launch" counterforce—using a mix of capabilities to target missiles and launch infrastructure—that are even harder to observe and measure. Capabilities like counter-space and cyber and electronic warfare have been a part of the strategic weapons mix even back into the 1970s.⁶⁶³ These capabilities are difficult to demonstrate, and their efficacy would be hard to deduce in advance. But our analysis shows that even an increase in China and Russia's uncertainty about the efficacy of the United States's damage limitation capability can create a crisis bargaining advantage. This is because their leaders and their militaries must take these capabilities into account, even if it is at a discount to more demonstrable and measurable alternatives.

Last, there is the reciprocal concern and uncertainty over Russian and Chinese counterforce and missile defenses. Additional U.S. intelligence insight can drive these uncertainties downward, thereby reducing red bargaining leverage at the margins. However, we find that manipulating uncertainty around the U.S. damage limitation capability is likely to create more advantage than driving down our own uncertainties around Chinese and Russian equivalents, which are likely significantly less capable to begin with.

Of course, even with a robust set of investments along the lines above, it goes without saying that the appearance of U.S. resolve to support allies and partners is critical to Washington's ability to outbargain Russia, China, or North Korea in a regional geopolitical crisis. Commitments to treaty alliances and regional partners are critical for demonstrating resolve, as is the ability to link the United States' credibility in one crisis with a specific ally to its broader network of alliances. The findings here suggest that asymmetric stakes can be overcome with advantages in the balance of power, but it makes little sense to invest billions in military capability if there is little resolve to uphold the international order.

661 Glaser and Fetter.

662 Li Bin and Wu Riqiang, "U.S. strategy of damage limitation vis-à-vis China: long-term programs and effects," *China International Strategy Review* (2024).

663 Brendan Rittenhouse Green and Austin Long, "The MAD that wasn't there: Soviet Reactions to the Late Cold War Military Balance," *Security Studies* (2017).

Conclusion

The expected growth of China's arsenal to near parity with the United States is drawing policymakers to a point of acknowledging that the U.S.'s plan to modernize its nuclear arsenal is necessary but not sufficient. New challenges to the security of the international order are coming, and policymakers seek avenues for advantage in a crisis, which preferably also do not spur an arms race. Here we have argued that qualitative advancements in weapon survivability, counterforce, missile defenses, and left-of-launch capabilities are an effective approach towards being able to bargain in a regionally-oriented nuclear crisis against a near peer adversary. Of course, nuclear weapons will always loom large over international crises between the major powers. But demonstrating and brandishing the ability to limit the damage from nuclear weapons can convey significant bargaining advantages as well.

Integrating Deterrence: When the Conventional War Goes Nuclear

*John Harvey*⁶⁶⁴

Introduction

This chapter addresses the deterrence challenges the United States faces with the emergence of China as a second nuclear peer adversary. The preeminent challenge is the need to deter China and Russia conventional aggression—and its potential escalation to nuclear—simultaneously, whether their actions are coordinated or merely opportunistic. The escalation spectrum ranges from initial “gray area” operations, to onset of conventional conflict, to very limited nuclear first-use in such conflict, to expanded nuclear use leading possibly to a major nuclear exchange. A systematic approach to so-called conventional-nuclear “integrated deterrence” designed to meet these challenges is described.

If, as many do believe today, that the most likely path to peer nuclear conflict involves escalation from ongoing regional conflict, then answers to two questions are needed:

- What more can be done in the conventional forces realm to deter the conflict in the first place or to fight it to a successful outcome?
- What adjustments to U.S. nuclear forces or force posture would best deter conventional war or deter/defeat an adversary's introduction of limited nuclear use to the conventional fight in order to achieve a more favorable outcome?

Too often the nuclear community ignores the first question to focus on the second, and regional planners focus on the first and assume away the second (e.g., arguing that “nukes are STRATCOM's job, not mine”). Rather, the two issues are coupled, specifically in driving decisions on needed investment in forces or adjustments in policy.

To develop answers to these questions, a case study is useful. My analytical focus is a Chinese amphibious assault using, at least initially, conventional forces to take over Taiwan by force.⁶⁶⁵ Our most senior military leaders consider this threat as both

664 The author wishes to thank Mark Cancian, Frank Kramer, Brad Roberts, and Rob Soofer for providing very useful review and comments on earlier drafts of this paper.

665 Somewhat lesser, but perhaps more likely, threats include a blockade of Taiwan by the PLA Navy, lower level strikes on Taiwan's airfields and other military infrastructure, a strategy of diplomatic isolation and economic coercion of Taiwan, and supporting gray area operations. All must be addressed in a comprehensive assessment.

dire and near-term.⁶⁶⁶ Moreover, the president has stated in explicit terms that the United States will come to Taiwan's aid in such an event.

Wargaming a Chinese Amphibious Assault on Taiwan

While the Russia-NATO threat has been studied extensively in war games, tabletop exercises, and other analyses, both in classified and unclassified settings, the Chinese amphibious threat to Taiwan has not, until recently, garnered the same level of rigorous assessment in the unclassified arena. A 2023 CSIS report⁶⁶⁷ by Mark Cancian, Matthew Cancian, and Eric Heginbotham provides a useful basis for this analysis and significant new insights. It enriches our thinking about how nuclear threats might alter an initially conventional conflict.

The CSIS team carried out a series of 25 wargames involving a “base case” using a set of assessed “most likely” parameters covering strategy, operations, weapons, and infrastructure. Several so-called “excursion cases” were also gamed using plausible alternative assumptions, mostly “pessimistic” from the allied perspective, in order to identify key U.S. vulnerabilities. A few games were run with more optimistic assumptions.

Developing the wargames involved coupling historical precedent with the best available data on the performance of weapons systems engaging or defending targets. Historical examples of amphibious operations, including the capabilities demonstrated by the United States during World War II, were used to estimate what the PRC amphibious assault force could achieve.⁶⁶⁸ Historical evidence about prior ship defense engagements coupled with unclassified technical data on the associated threats to targets, or in defending targets, were used to establish kill probabilities [e.g., on the Long Range Anti-Ship Missile (LRASM), Harpoon, China's DF-26 and ship defense via U.S. Aegis SM-3, China's HHQ-9, among others]. Participants in the games included China, the U.S., Japan and Taiwan; all are attributed with best estimates of 2026 forces and capabilities.⁶⁶⁹

The goal of the CSIS approach was to answer three questions:

- Would a PRC invasion of Taiwan succeed in 2026?

666 Bill Gertz, “China's move on Taiwan could come even sooner than projected,” *Washington Times* (February 1, 2024). Adm. Sam Paparo, then commander of the Indo Pacific Command, noted his predecessor's widely cited disclosure several years ago that China's communist leaders have ordered the country's military to be ready to take over Taiwan by 2027.

667 Mark F. Cancian, Matthew Cancian, and Eric Heginbotham, *The First Battle of the Next War: Wargaming a Chinese Invasion of Taiwan*, Center for Strategic and International Studies (January 2023).

668 “Large-scale amphibious invasion is one of the most complicated and difficult military operations, requiring air and maritime superiority, the rapid buildup and sustainment of supplies onshore, and uninterrupted support. An attempt to invade Taiwan would likely strain PRC's armed forces and invite international intervention . . . (making) an amphibious invasion of Taiwan a significant political and military risk for Xi Jinping and the Chinese Communist Party.” Quoted from: *Military and Security Developments Involving the People's Republic of China 2021*, Report to Congress, Department of Defense (2021).

669 Parameters were rigorously determined beforehand based on reproducible analytics and not adjusted in real time based on expert judgement from the results of games already played. This allows consistent and unbiased comparisons across games.

- What variables most affect that outcome?
- What would be the cost to both sides?

The year 2026 was chosen in part due to the views of military leaders that the threat is near term.

In the “base case,” PRC forces assigned to the conflict commence a full mobilization one month before combat operations are to begin (D-30). The U.S. and Taiwan start their mobilization at D-15—the U.S. would begin to move ships and aircraft into the theater including to its airbases in Japan. On D-Day, China launches a major amphibious assault on Taiwan and establishes a “picket line” of surface combatants deployed on either side of the invasion fleet to provide a protective zone. Allied air and naval combatants already in theater, or heavy bombers based on Guam or CONUS bases, launch LRASMs from outside the protective zone. Once long-range systems are expended, strike operations must move closer to the threat and are thus subject to higher risk. This highlights the importance of fielding sufficient numbers of LRASMs for ship attack, the Joint Air to Surface Standoff Missile for ground attack, and Harpoons on Taiwan.⁶⁷⁰

The U.S. and Taiwanese responses are immediate. Any delay complicates the defense, increases U.S. casualties, and raises the risk of China establishing a sustainable beachhead on Taiwan. Japan, having granted use of U.S. airbases, also authorizes use of civilian airports (one per U.S. airbase) to allow additional dispersal for aircraft survivability.⁶⁷¹ Japan would plan to employ both offensive and defensive forces once its territory comes under attack. The base case rules-of-engagement assumes PRC conventional strikes are authorized on U.S. and Japanese territory as well as coalition strikes on the Chinese mainland.

The conventional war involves a race in time. The PRC amphibious assault fleet and associated forces must establish a beachhead with sufficient troops and equipment to capture airbases and civilian port facilities needed to supply a much larger occupying force before allied air and naval strike forces can neutralize it.

In the early going, major air and missile strikes on Taiwan’s air and naval forces inflict enormous losses, essentially neutralizing those forces after the first few days. At the same time, Taiwan’s 400 Harpoon anti-ship cruise missiles launched from surviving aircraft, or from ground mobile launchers, would extract a significant cost to ships comprising the invasion armada.

670 At the time there was speculation that the longer-range JASSM-ER, designed to strike fixed targets, may have some capability to strike moving ships. Because of the uncertainties (not much in the unclassified literature) this parameter is varied across the various games. The base case includes some capability for a maritime JASSM-ER, many of the excursion cases assume no such capability. Just recently, the Navy revealed that flight tests of a LRASM based on the JASSM-ER airframe were carried out, see John A. Tirpak, “Navy Shoots Four LRASMs in ‘Graduation Exercise,’” *Air & Space Magazine* (April 3, 2024).

671 Typically, 90% of lost aircraft are destroyed on the ground via strikes on airbases, emphasizing the importance of dispersal and hardened aircraft shelters (HAS) for improved survivability.

In nearly every game, PRC forces establish a beachhead on Taiwan territory. In only a few cases are these forces sufficient to defeat Taiwanese counterattacks supported by long-range U.S. air and naval strike. Thus, Taiwan's ground force, in terms of numbers, competence, and ability to "mop up" China's landed force, is a key factor in the war games.

Game play typically explores about a month of decision-making and outcomes, although hostilities could continue for extended periods. The CSIS base case was run three separate times with different players and each time led to a decisive allied victory in terms of sustaining Taiwanese autonomy. Several of the "pessimistic excursion" war games still resulted in decisive allied victories; in others what are termed "stalemates" leaning to a Chinese advantage, a U.S. advantage, or an indeterminate outcome.⁶⁷² Only two test cases—"Taiwan goes it alone" and "Japan denies use of U.S. airbases"—result in decisive victories for China.

The conventional fight is extremely intensive and of short duration. All outcomes involve substantial losses for both sides. Even in the base case, with a decisive coalition victory, two U.S. aircraft carriers are destroyed along with tens of other surface combatants, hundreds of aircraft destroyed, thousands of troops killed and wounded and with substantial infrastructure destruction. The prospect of such losses over such a short-term engagement could cause China to doubt the resolve of the American people to pursue the war and thus give China a free hand.

The wargaming exercise identified the most important factors benefiting Taiwan's defense:

- Japan allows use of U.S. bases in Japan for combat operations.
- Japan facilitates survivable combat aircraft by (1) fielding additional hardened aircraft shelters beyond those already programmed, and (2) making its large regional airports available for aircraft dispersal.
- United States avoids pre-conflict "shows of force" involving carriers (see below).
- PRC Navy amphibious competence less than anticipated.
- Ship defenses worse than anticipated for both sides.

More generally, the CSIS team identified four conditions for success:

672 "Pessimistic" variations from the base case include one or more of the following assumptions: delayed U.S. mobilization, delayed U.S. entry into the war (D+4, D+14), U.S. SSNs withheld to address any Russian opportunistic aggression, U.S. reinforcements delayed because of a crisis elsewhere in the world, no maritime strike capability for JASSM-ER, fewer Taiwanese Harpoons, Taiwan forces paralyzed until D+4; reduced competence of Taiwan ground forces, U.S. strikes on mainland forbidden.

- Taiwanese forces must hold the line with vigorous resistance to invading forces.
- The U.S. must join battle hostilities within days and with its full range of capabilities.
- The U.S. must have use of its bases in Japan for fighter and strike aircraft operations.
- The U.S. must be able to strike the PRC fleet rapidly, en masse, from outside the Chinese defense zone.

These conditions then inform the following recommendations both in the policy realm and forces investment:

- **Regarding Taiwan:** Bringing Taiwan's ground forces up to par in terms of authorized numbers of troops, equipment, logistics, training and operational planning must be a central focus of Taiwan's defense modernization and of U.S. pre-war assistance to Taiwan. Rather than procuring costly ships and aircraft that China's superior strike forces will destroy in the first few days of conflict, Taiwan should invest in sea mines and ground-based anti-ship and air defense missiles that could better support ground forces.
- **Regarding engaging Japan:** Deepen diplomatic and military ties with Japan with direct consultations on specific needs in defending Taiwan including ensuring U.S. use of its bases in Japan early in the conflict.⁶⁷³
- **Regarding allied long-range anti-ship strike:** Increase the arsenal of long-range anti-ship missiles as a top acquisition priority (LRASM, including any maritime strike capability from JASSM-ER, and to a lesser extent Harpoon).

Other supporting recommendations derived from conventional wargaming can both complement, or offer cautions to, accompanying efforts to bolster nuclear deterrence:

- **Avoid "shows of force"** or other crisis deployments that create vulnerabilities: To demonstrate resolve, the United States might drive a high-value carrier battle group through the Taiwan Strait, or air transport in a Marine littoral regiment to reinforce Taiwanese ground forces—but either might generate the attack it seeks to deter. A show of conventional forces that generates such an attack is a failure

⁶⁷³ President Biden and Prime Minister Kishida of Japan in 2024 announced moves to further enhance military cooperation in response to China's aggressive actions including in the South China Sea. This could provide a vehicle for such engagement. See, Peter Baker, Michael D. Shear, "U.S. and Japan Agree to Tighten Ties in the Face of China Aggression," *The New York Times* (April 11, 2024).

of conventional deterrence and increases reliance on nuclear deterrence to prevent further escalation.

- **Avoid striking the mainland:** Such strikes entail a high risk of Chinese counter escalation and may not be necessary if the United States and Taiwan can defeat the invasion force. Indeed, the wealth of targets in the invasion fleet should be the primary allied focus without having to run the higher risk of striking heavily defended airbases and installations on the mainland. It also reduces the potential nuclear escalation risks.
- **Prioritize submarines and other undersea platforms:** SSNs are highly lethal to an invasion fleet and highly survivable. Were such submarines to be fielded with a small complement of land-attack nuclear SLCMs, as discussed below, regional deterrence and extended deterrence would be strengthened.
- **Prioritize sustainment of the bomber fleet over fighters:** Bombers compared to strike aircraft are able to deliver per sortie a much larger package of anti-ship missiles and, importantly, could be based outside the Chinese missile zone. Sustaining additional bombers to enhance conventional capabilities, rather than retiring them, also augments nuclear carriage capacity to hedge further geopolitical reversals or technical surprise.

A key point here is that choices made in the context of ongoing conventional conflict have, at the same time, implications for the nuclear level of warfare.

When the Conventional Conflict Goes Nuclear

The 2022 NPR called attention to rising U.S. concerns about an adversary's limited nuclear first-use in an ongoing conventional conflict as means to achieve a more favorable outcome—the so-called “escalate to win (or not lose)” strategy.⁶⁷⁴ The increased role for tactical, low-yield nuclear weapons in both Russia's and China's security posture and their prominence in modernization programs and military exercises suggest that such an employment strategy has gained a foothold in their evolving nuclear doctrines. An adversary who believed it could control escalation might resort to limited first-use, to solidify territorial gains from an initial conventional attack, make it more difficult for the United States to come to the defense of allies, or end a losing conflict short of regime demise.⁶⁷⁵ Thus, it behooves U.S. strategists to devote attention to whether and, if so, how escalation might be controlled while preserving critical national interests.

674 M. Kroenig, “A Strategy for Deterring Russian Nuclear De-Escalation Strikes,” Atlantic Council (April 2018).

675 During the Cold War, a broadly-held view was that any use of nuclear weapons, however limited, would escalate to global nuclear holocaust. Among some senior Russian military leaders that view may not be so widely held today. See Michael Kofman and Anya Fink, “Escalation Management and Nuclear Employment in Russian Military Strategy,” War on the Rocks (September 19, 2022).

But managed escalation, or “climbing the escalation ladder,” is, of course, a troubling concept. It infers a degree of analytical certainty that is simply not there. Unlike analyses of conventional conflict, in which there is a rich storehouse of technical, operational, and historical data from which to draw, no one can predict with any certainty how limited nuclear use would play out. We can only speculate. Would it lead to the desired outcome sought by the first user or that for the responder to first use? Under what circumstances? Would the nuclear fight remain limited or escalate rapidly to nuclear Armageddon? We should not fool ourselves—the challenge of assessing how best to deter and, if necessary, respond to limited nuclear first use is formidable; great skepticism must be accorded any results presented as definitive. That said, clearly, the best option for controlling limited nuclear first use evolving from conventional conflict between nuclear peers is to avoid the conventional conflict in the first place by deterring it.

On this last point, a pressing deterrence challenge is to prevent the rapid forceful takeover by Russia of a Baltic state before NATO can adequately reinforce. This, coupled with a Putin threat of early nuclear use, could weaken European resolve to restore the status quo. Increased forward-stationing of U.S. conventional forces would help to deter such conflict by bringing force to bear more quickly and reducing reliance on vulnerable reinforcement routes. Of late, progress has been made in NATO on forward stationing but less so on needed NATO nuclear modernization.⁶⁷⁶

Regarding China’s threat to Taiwan, as pointed out earlier, forward stationing of air and naval combatants to U.S. bases in the Asia-Pacific region could bolster conventional deterrence. The United States today is taking advantage of exercises with Allies in the region to pre-position needed equipment (vehicles, food, medical, among other materials to support troops) to dispersed locations in the region. But overall funds to support prepositioning of ground equipment and munitions or the forward stationing of naval and air forces in Asia over the next few years is dwarfed by comparable actions in the European theater.⁶⁷⁷ In the near term, therefore, in a conflict with China, we will be joining the fight with today’s in-theater forces, reinforced by the capabilities of existing U.S. ship and air logistics assets. More is needed here.

676 For details about the European Reassurance Initiative, renamed the European Deterrence Initiative, see White House Fact Sheet (June 3, 2014). <https://obamawhitehouse.archives.gov/the-press-office/2014/06/03/fact-sheet-european-reassurance-initiative-and-other-us-efforts-support->. Accessed July 19, 2024. For more recent initiatives on U.S. defense contributions to Europe see, DOD Fact Sheet (June 29, 2022). <https://www.defense.gov/News/Releases/Release/Article/3078056/fact-sheet-us-defense-contributions-to-europe/>. Accessed July 19, 2024. Regarding initiatives to bolster NATO’s rapid response force, and its first time deployment after Russia’s February 2022 invasion of Ukraine, see NATO issue paper, “NATO Response Force,” North Atlantic Treaty Organization (July 11, 2022). https://www.nato.int/cps/en/natohq/topics_49755.htm. Accessed July 19, 2024.

677 In recent years, the United States has been strengthening its overseas posture and capabilities for pre-positioning under the Pacific Deterrence Initiative. See: “Military Posture in the Indo-Pacific,” Congressional Research Service (October 30, 2023). Also see: Phil Stewart, Idrees Ali, “How the U.S. is preparing for a Chinese invasion of Taiwan,” Reuters (January 31, 2024).

Turning now to the issue of introducing nuclear weapons to the heretofore conventional fight, the following analysis proceeds from two assumptions.⁶⁷⁸ Neither the United States nor China, out of the blue absent extraordinary circumstances, would carry out a major nuclear first strike on the other's homeland. Second, both would seek to avoid any such escalation arising from its limited first use, notwithstanding that attempts at such escalation management are fraught with uncertainty and risk.⁶⁷⁹ Wargaming offers insights into not only which scenarios are more important but also how efforts to bolster U.S. nuclear posture can reinforce conventional deterrence and vice versa. Consider the following cases:

- China limited nuclear first use. Either China believes beforehand that it will win conventionally but suffers setbacks and resorts to limited nuclear strikes to effect a more favorable outcome, if not victory. Or, China is uncertain it can win conventionally and plans for early nuclear first-use as part of a leading edge attack on U.S. at-sea forces.
- If Chinese leaders were cautious, U.S. and Japanese airbases in Japan and the U.S. base at Guam would not be initially struck. More likely targets are U.S. naval forces already at sea, and those having greatest impact would be aircraft carriers deployed to the region. A few nuclear weapons delivered by ballistic missiles, supported by ISR, that took two carriers out of the war could markedly degrade U.S. capabilities to reduce the invasion force pending arrival of the full complement of U.S. strike aircraft and bombers. Such use would have strategic impact as well. It could weaken the will of allied populations to continue hostilities. A shutdown of U.S. strike operations from its bases in Japan resulting from public outcry could turn the tide of the war to China's favor. A cessation of Taiwan's resistance to a landed PRC force could ensure the same outcome.
- Would the United States respond with nuclear weapons and if so, how? Limited first use at sea by China could provoke a U.S. nuclear response, but not necessarily. A key criterion must be whether U.S. nuclear use is essential to win the war or otherwise restore deterrence short of further escalation. Conventional strikes on the naval and air bases supporting attacks on the carriers could achieve important coalition military objectives. At the same time, they are risky; U.S. planners may view use of a nuclear weapon on Chinese territory as overly escalatory. The most high-leverage U.S. nuclear use would be as the Chinese

678 For related discussion, see Matthew Kroenig, "Deterring Chinese Strategic Attack: Grappling with the Implications of China's Strategic Forces Buildup," Atlantic Council (November 2021); John R. Harvey, "Meeting the Challenge of Deterring Two Nuclear Peers," Real Clear Defense (October 4, 2023); and Greg Weaver, "The Role of Nuclear Weapons in a Taiwan Crisis," Atlantic Council Issue Brief (November 2023).

679 China's use of a nuclear weapon against Taiwan proper would also be off the table. In this case, China would be nuking its own citizens which would jeopardize even a long term goal of reconciliation.

invasion force is concentrating for landing operations to assault a relatively limited stretch of viable beachfront. Otherwise, the fleet is too dispersed for a limited nuclear strike to be effective. Alternatively, U.S. conventional strike operations from bases in Japan, Guam, and CONUS, as well as from other at-sea forces, may still be enough to finish the destruction of the Chinese fleet without the carriers.

- This scenario could spin off in several directions. While losing the initial fight, destruction of two very high-value U.S. military assets might provide the face saving gesture that would enable China to return to the status quo absent U.S. nuclear use. Or, the Chinese might seek to enforce an economic sea blockade of Taiwan as a fall back, but this will be difficult if many of its surface combatants have already been destroyed in the conventional fight. Or a president might decide that a few nuclear weapons be employed for strategic reasons, for example, to discourage China from any further use, otherwise restore deterrence, or to convince allies of U.S. resolve.
- Escalation to nuclear strikes on U.S. overseas bases on Japan and Guam.
- If China's initial nuclear use comes up short, there is the risk that it will further escalate to nuclear strikes on U.S. overseas bases. If undefended, a single warhead delivered to each of say ten bases would destroy them. If defended, more would be needed. This war then becomes more strategic in nature and escalation control more difficult. Even if the United States withheld strikes on China's strategic nuclear forces and nuclear command and control (NC2), strikes on theater C2, if co-located with NC2 systems, could be misunderstood as precisely that, potentially unleashing the Chinese nuclear arsenal on the U.S. homeland.
- How might the United States respond with its nuclear weapons? To achieve military objectives, demonstrate its support of a critical ally, and assure other allies who come under the U.S. nuclear umbrella, the United States might well plan to employ nuclear weapons against China's intermediate-range missile launch sites, air bases hosting nuclear strike aircraft, and naval bases supporting the invasion. With its air bases in the region demolished, however, a U.S. F-35 carrying the LRSO cruise missile would not be viable even if LRSO were available in 2026. The United States would rely on CONUS-based heavy bombers deployed with ALCM and/or low-yield Trident warheads deployed on SSBNs cruising within range of targets. This force could also inflict large losses to the Chinese fleet as successive waves approach the beaches. Whether that would be enough to restore a conventional advantage is unclear. In any case, a few tens of nuclear weapons use by both sides, including on each other's and allies' territory, makes escalation control doubtful unless both sides showed enormous restraint under highly stressful conditions. To limit further damage, there could be strong pressure for a U.S. president to direct a disarming strike on China's strategic forces.

- U.S. limited first nuclear use to defeat Russian opportunistic aggression against NATO.
- Here, Russia takes advantage of the U.S. war with China to achieve by force its strategic goals in Europe.⁶⁸⁰ Ideally, the United States would posture sufficient conventional forces, combined with forces provided by allies, to deter this second conflict while fighting the first, and retain sufficient nuclear forces to deter both conflicts from going nuclear. Today, the United States does not possess conventional forces sufficient to fight simultaneous major conflicts in Europe and Asia. Given the state of today's defense industrial base for conventional forces and ongoing efforts to modernize an aging nuclear enterprise currently running at full tilt this would be an expensive, long-term effort. The Biden 2022 NPR highlights this risk in calling for an increased role for nuclear weapons:
- In a potential conflict with a competitor, the United States would need to be able to deter opportunistic aggression by another competitor. We will rely in part on nuclear weapons to help mitigate this risk, recognizing that a near-simultaneous conflict with two nuclear-armed states would constitute an extreme circumstance.⁶⁸¹
- What adjustments in U.S. nuclear capabilities or posture could help to deter opportunistic aggression by either Russia or China or, if necessary, be employed in responding to such aggression with its limited first use? Because a major Russian assault against a NATO partner would be fought, initially at least, on friendly territory, collateral damage is a key concern. Consequently, nuclear use must be highly discriminate and, hence, employ warheads of lower yield. During the Cold War, the United States fielded thousands of low-yield, tactical nuclear weapons, using all means of delivery down to artillery shells and even soldiers. By 1991, nearly all of those weapons were retired. The United States is maintaining today three options for low-yield warhead delivery:
 - B61 bomb delivery on F-16 strike aircraft and the B-2 strategic bomber,
 - ALCM delivery on B-52 bombers, and
 - A low-yield warhead delivered by the Trident II SLBM.
- U.S. B61 bombs are deployed in NATO Europe with Dual Capable Aircraft (DCA) that, like the F-16, are available for both nuclear and conventional missions. DCA squadrons are not currently deployed to Asia. To enhance its nuclear posture in

680 If the Chinese assault on Taiwan is in 2026, as this paper posits, Russia's general purpose forces, if not still bogged down in Ukraine, would be in no condition to take advantage. At least several more years would be needed to replace, rebuild and modernize its conventional forces to pose a true threat to NATO.

681 2022 *Nuclear Posture Review*, Department of Defense release (October 27, 2022).

Europe, NATO could add DCA squadrons to countries such as Poland who have called for such deployments. Alternatively, it could prepare bases with the needed security to host DCA nuclear deployments from time to time on a temporary basis.⁶⁸² In Asia, this would be a heavy lift for Japan, but perhaps not so for the ROK. Still, such deployments would convey important messages for both deterring adversaries and assuring allies.

- That said, air-delivered options today are becoming more and more vulnerable to improvements in adversary air defenses. Ongoing modernization—an updated B61-12 gravity bomb, a new LRSO cruise missile, and new F-35 and B-21 bombers—will mitigate, but not eliminate, the problem. Low-yield Trident could strike anywhere in the world, with greatly reduced unintended casualties, within tens of minutes of a presidential decision. It could help deter aggression by placing at prompt risk, once located, mobile command posts essential to military operations. A downside is that it trades a larger number of strategic warheads per missile for a smaller number of lower-yield systems.
- Nuclear SLCMs deployed on attack submarines would offer an employment option that would strengthen deterrence of limited first-use and further assure allies.⁶⁸³ It would provide an additional hedge to the increasing uncertainties faced in deterring future threats and offer opportunities to convey messages of assurance and deterrence via submarine patrols in European and Asian waters conceivably accompanied by port visits. Unlike NATO's DCA in Europe, nuclear SLCMs on SSNs are survivable to preemptive attack and their command and control is solid. This conveys to Russia and China that any limited first use could lead to an assured, timely, precise, and proportionate response from U.S. forces locally deployed (but not based) to the region. This greatly strengthens the credibility of U.S. employment in response to opportunistic aggression that cannot be defeated with available conventional forces.
- Strategic deterrence involving “two nuclear peers” (last “rung” of the escalation ladder)
- Previous discussion focused on the non-strategic capabilities of the United States to respond to limited first use or to employ nuclear weapons first in conflict to achieve political or military objectives. The following discussion, including in connection with adversary opportunistic aggression, brings to the fore the question of U.S. nuclear force adjustments that might be called for to deter strategic attack.

682 Eric Edelman and Franklin C. Miller, “An Ongoing and Necessary Renaissance: NATO's Nuclear Posture,” CSBA Research Brief (January 24, 2024).

683 John R. Harvey and Robert Soofer, “Issue Brief: Strengthening Deterrence with SLCM-N,” Atlantic Council, Scowcroft Center for Strategy and Security (November 2022).

Quoting from the Biden NPR: “By the 2030s the U.S. will, for the first time in its history, face two major nuclear powers as strategic competitors and potential adversaries. This will create new stresses on stability and new challenges for deterrence, assurance, arms control and risk reduction.”⁶⁸⁴

- Deterring a hostile Russia and China, possibly at the same time, has been a fixture of U.S. policy for decades. During the Cold War, even in light of a major nuclear exchange with Russia, sufficient survivable warheads were maintained to deter any incentive by China to “pile on.” This was during a time when both Russia and the United States maintained many thousands of strategic warheads, while China possessed just a few tens of ICBMs. There was both quantity and flexibility then in U.S. forces to deter both. Today, with deployed accountable strategic warheads under New START capped at 1,550, estimates are that China will field one thousand additional modern ICBM warheads by 2035.⁶⁸⁵ Moreover, the intensive, ongoing U.S. program to modernize each leg of the aging Triad leaves little excess capacity to respond with new nuclear program starts in the near term.
- If the Russian and Chinese nuclear and conventional threats were independent and uncorrelated, then the two nuclear peer deterrence problem would be more manageable. If the United States and Russia were to continue limits on warheads and delivery systems, and China stopped once it achieved peer status, some adjustment to targeting priorities is warranted but not likely a pressing need to augment U.S. strategic forces.⁶⁸⁶
- That said, in a startling development, Russia and China jointly issued a statement in February 2023 highlighting security cooperation. In that statement, Putin and Xi Jinping noted, “Friendship between the two States has no limits.” In this light, it would be prudent to plan for some degree of Sino–Russian security cooperation in nuclear planning and force posture.⁶⁸⁷ The pressing question then becomes whether our planned modernization and deployments of nuclear forces will be sufficient to deter simultaneous strategic threats from those adversaries, or

684 2022 *Nuclear Posture Review*, op. cit.

685 *Military and Security Developments Involving the People’s Republic of China, 2022*, Annual Report to Congress, Office of the Secretary of Defense (2022).

686 Adjustments in U.S. non-strategic nuclear forces may still be warranted if needed, among other things, to assure allies of our commitments to come to their defense in light of extensive Russian deployments of these systems.

687 In March 8, 2023 testimony before the House Armed Services Subcommittee on Strategic Forces, John Plumb, Assistant Secretary of Defense for Space Policy, called attention to Russia’s provision of highly-enriched uranium for use in China’s breeder reactors. According to Plumb “. . . there’s no getting around the fact that breeder reactors are plutonium, and plutonium is for weapons.” Russia and China jointly issued a statement in February 2023 highlighting security cooperation in which both leaders noted “Friendship between the two states has no limits.”

whether our nuclear posture needs further refinement.⁶⁸⁸ This is more than just an issue of adequate forces to deter, but also, in the case of allies, that which is needed to assure.

- U.S. deterrence strategy, very importantly, depends on the specific adversary to be deterred and involves a mix of targets that are all tied to that adversary's value structure including the ability to pursue warfare. The potential cost incurred in their destruction is intended to ensure that no rational adversary would ever contemplate a nuclear strike against the United States or its allies. In this regard, President Xi is devoting substantial resources and high-level focus to China's rampup of its silo-based ICBM force capable of much improved prompt hard target kill. This force falls into the high-value-asset target category. The United States must decide whether it is essential to hold such forces at risk and, if so, how and how many.

Adjusting U.S. Strategic Nuclear Posture

The final step in this integrated approach is to derive implications for the design of the U.S. nuclear force and, in particular, its counterforce component.⁶⁸⁹ U.S. nuclear forces do include a robust capability to hold adversary nuclear forces at risk. Over the years, this has been a topic of debate but, to be clear, the main area of contention is not U.S. counter nuclear capabilities but U.S. prompt counter nuclear capabilities represented largely by its ICBM force. Indeed, most warheads in the U.S. nuclear arsenal have sufficiently high accuracy and explosive power to hold at risk most of the hardest military assets fielded by adversaries. Only ICBMs, however, can deliver such warheads to targets within 30-60 minutes of a president's decision to do so. A prompt counterforce component of the U.S. nuclear triad is important for several reasons:

- Contributes to robust deterrence in both central strategic and regional scenarios by enabling a full range of enemy assets to be held at timely risk.
- Complicates enemy attack planning—the hundreds of ICBM aim-points eliminate the opportunity for cheap attack.
- Enables redundancy and complementarity among triad components.
- Provides the president with options to limit damage to the United States and its allies.

⁶⁸⁸ The U.S. nuclear modernization program of record will replace aging warheads and platforms for their delivery. The intent is to deploy modern, reliable systems at current force levels, not increase numbers.

⁶⁸⁹ Counterforce targets include conventional and nuclear forces whether stationary or on the move, associated infrastructure, industry that supports these forces, and national political and military control. Nuclear counterforce targets include ICBM silos, mobile ICBMs, submarine bases, strategic bomber bases, elements of the nuclear command and control system, ballistic missiles and bombers on route to targets and air and missile defenses.

- In rare cases against certain adversaries, coupled with defenses and other conventional forces, provides limited capabilities to preempt an imminent enemy nuclear strike.
- While prompt counterforce has potential to be destabilizing in nuclear crises, asymmetries in such capabilities could be destabilizing in a different sense.⁶⁹⁰

Having a capability to hold some portion of China's modern silo-based ICBMs at prompt risk is prudent—and not just for damage limitation. China must come to understand, as Russia eventually did, that these systems are not being given a “free ride,” thus providing some disincentive to the ongoing rampup.⁶⁹¹ One U.S. response is force augmentation involving additional U.S. ICBM and potentially SLBM warheads. China may add about 1,000 ICBM warheads (350 silos) by 2035 with about half fielded by 2030.⁶⁹² Augmentation options to hold at risk some portion of China's silo-based ICBMs could include—700 additional warheads (two per silo), 350 additional warheads (one per silo), or quite possibly fewer depending on willingness to accept risk. Two-on-one targeting will be seen as, and indeed is, excessive. Given this admittedly rough estimate and assuming that Russia remains at roughly current levels, no more than a few hundred additional ICBM warheads could meet “two peer” deterrence needs.

In the near term, U.S. forces could be augmented by uploading reserve warheads to existing delivery platforms. Re-MIRVing Minuteman III, uploading warheads to fill currently unoccupied slots on the Trident D-5 SLBM, and increasing the “at sea” tempo of the SSBN fleet could add several hundred additional warheads to the day-to-day, prompt force.⁶⁹³ Once activated, upload timelines will vary depending on delivery system—days to weeks for bombers, weeks to months for the subs, and 1-3 years for ICBMs. Uploading does add some operational inefficiencies. Still, this is not an insignificant force augmentation capability by any measure.

If one were optimistic regarding the 2035 estimate, prudent and timely U.S. force augmentation would begin in the late 2020s to 2030 timeframe. On the other hand, being skeptical of intelligence assessments is prudent policy; we must consider that China could accelerate its buildup. Uploading sooner hedges that risk.

It is interesting to consider the role that upgrades to U.S. homeland and regional missile defenses could have in deterring limited, first use of nukes in regional conflict. To defeat a limited strike—a few warheads targeted on the U.S. homeland—would

690 A detailed discussion of this last point can be found in: John R. Harvey, *op. cit.*

691 To be clear, to achieve this benefit does not require holding the entire Chinese ICBM force at prompt risk.

692 *Military and Security Developments Involving the People's Republic of China, 2022*, *op. cit.*

693 U.S. B-52 bombers can carry up to 20 ALCMs but are typically deployed with fewer. Uploading spare reserve ALCMs to “open” weapon stations would add significantly to forces numbers. Such augmentation, however, would not provide prompt delivery capability. Nor would it be survivable unless bombers were placed on alert which, in and of itself, could send both good and bad geopolitical messages. Moreover, bomber alert posture is not sustainable for an extended period.

entail providing U.S. ground-based interceptors and sensors designed to outpace the North Korean ICBM threat with a capability to counter more sophisticated Chinese and Russian ICBMs. In any escalation involving a limited strike on U.S. territory, an adversary might be more reluctant to devote the higher number—a few tens of warheads—required to overwhelm homeland defense and thus risk uncontrolled escalation. Planned improvements in regional missile defenses—fielding integrated air and missile defenses in the NATO and Pacific theaters—could have a similar effect. As with SLCM-N, effective U.S. missile defenses could lower force augmentation needs in responding to China’s ICBM buildup.

Conclusions and Recommendations

The Biden NPR called attention to thorny issues connected with the future prospect of two nuclear peers but did not address detailed solutions nor answer the two questions posed at the start of this chapter. The chapter offers specific recommendations that do address answers to these questions but, more broadly, calls for an integrated approach to conventional-nuclear deterrence as outlined in the China case study.

Along these lines, the next administration should, with urgency, establish an NPR-like process, led by the DOD, to review the Chinese and Russian nuclear programs, their potential for acceleration, the implications of Sino-Russia condominium in the nuclear arena, and the status of U.S. force upload capabilities. Other specific issues to address include:

- Appropriate forward stationing of U.S. conventional forces in Europe and Asia,
- Actions to strengthen the U.S. nuclear posture in both regions including via the deployment of SLCM-N
- Augmenting ballistic and cruise missile defenses.

A set of options should be developed for presidential decision including, at minimum, a viable, executable option to field a few hundred additional ICBM warheads to meet emerging deterrence needs in the 2030 timeframe.

Other Recommendations

Recommendations offered earlier in this paper addressed the specifics of a Chinese amphibious assault on Taiwan. Those following address broader questions in connection with an integrated approach to deterrence of adversaries and assurance of allies:

Engaging Coalition Publics

Heavy losses over a short-term engagement could cause an adversary to doubt the resolve of U.S. and allied citizenry to pursue a war and thus give the

adversary a free hand. Early limited, nuclear first use by an adversary could have a similar effect.

Recommendation: Engage publics to promote threat awareness and convince adversaries that allies are taking needed steps to minimize losses.

DCA Actions

DCA deployments convey important messages for both deterrence and assurance.

Recommendation: Bolster U.S. nuclear posture in Europe. Consider adding DCA squadrons to countries such as Poland whose officials have called for such.

Alternatively, prepare bases with the needed security and infrastructure to host DCA from time to time on a temporary basis.

Recommendation: Engage Asian allies on their questions or sentiments regarding a DCA presence and be open to address their expressed needs.

China's ICBM Rampup

China must come to understand, as Russia did, that its ongoing ramp-up of modern ICBMs is not being given a “free ride” and that the United States will respond to negate it.

Recommendation: Hold a portion (to be determined) of China's modern silo-based ICBMs at prompt risk.

Warhead Upload

In the near term, U.S. forces could be augmented by uploading reserve warheads to existing delivery systems.

Recommendation: U.S. strategic force augmentation, as needed, to begin in the 2030 timeframe, providing time to build a political consensus for augmentation without jeopardizing the bipartisan modernization program underway, to fix any force upload shortfalls. It would also provide time for other strategies (e.g., diplomacy, arms control, U.S.-China dialog on strategic stability) that, while perhaps unlikely to succeed in the current security environment could, if they did, mitigate upload needs.

Missile Defenses

A peer adversary could be reluctant to devote the higher number of warheads required to overwhelm U.S. enhanced missile defenses and thus risk uncontrolled escalation.

Recommendation: Advance planning to qualitatively improve missile defenses to counter peer adversary ballistic missiles.

SLCM-N

SLCM-N offers a unique theater employment option that would strengthen deterrence of limited nuclear first-use and further assure allies.

Recommendation: Field nuclear SLCM on attack submarines.

In a Mirror, Dimly: Counterforce in Chinese Nuclear Thinking

Brian Radzinsky

Like their Russian counterparts, military strategists affiliated with official People's Republic of China (PRC) research institutes do not draw a distinction between counterforce and countervalue targeting. But related concepts of nuclear superiority and preemption, as well as commentary on U.S. policy, provide a nascent Chinese lexicon on nuclear targeting. These concepts are not equivalent to the countervalue/counterforce dichotomy, however. PRC writing leaves important aspects of the counterforce debate untouched, such as the question of targeting non-combatants, the relationship between credibility and employment doctrine, and the role of nuclear targeting in escalation management.

How do PRC military thinkers think about counterforce targeting and its main analogues? How do these thinkers understand their own targeting requirements? How relevant is this thinking for understanding China's evolving approach to its growing nuclear arsenal?

Chinese Thinking on Nuclear Targeting

While Russian (and prior, Soviet) strategic thinking on nuclear weapons dates to the late 1950s, China's People's Liberation Army (PLA) only began writing about nuclear strategy in the mid-1980s in response to a technical imperative to provide guidance to China's slowly developing nuclear force. As such, early doctrinal writings focused on developing concepts useful for warfighters, such as retaliatory counterstrikes and survivability. These writings were not focused on developing an operational lexicon for debates on nuclear strategy.⁶⁹⁴ Scholars of Chinese nuclear history observe that early PLA writings were "linked only loosely to [the] security environment" and only grew in sophistication after the development of the PLA Second Artillery corps (now the PLA Rocket Force). PLA writers have expanded their engagement with nuclear strategy topics in later years, but much of the focus remains on high-level strategy issues rather than on the operational capabilities needed to support China's nuclear strategy.

Perhaps because the Chinese Communist Party has limited debate on nuclear strategy, PLA-affiliated writings do not talk about counterforce and countervalue targeting like writers in the West, where these concepts are important for the debate on U.S. force sizing and capabilities.⁶⁹⁵ Instead, the closest analogue to counterforce

694 Taylor Fravel and Evan Medeiros, "China's Search for Assured Retaliation: The Evolution of Chinese Nuclear Strategy and Force Structure," *International Security* 35, no. 2 (2011), pp. 55-57.

695 There are two different Science of Military Strategy publications—published by the PLA Academy of Military Science and the National Defense University—both of which have been reissued in multiple editions. Joel Wuthnow, "What I Learned From the PLA's Latest Strategy Textbook," *China Brief* 21, no. 11 (May 25, 2021). <https://jamestown.org/program/what-i-learned-from-the-pla-latest-strategy-textbook/>. Accessed July 5, 2024.

in PLA writing is the concept of nuclear preemption. For instance, the 2013 PLA Academy of Military Science's version of the Science of Military Strategy argues that there are two basic forms of nuclear warfare: preemptive and retaliatory, which broadly addresses the notion of striking first (through preemptive nuclear strikes /先发制人的核打击/xianfazhiren de he daji) or second (through retaliatory nuclear counterstrikes, 后发制人的核反击/houfazhiren de he fanji).⁶⁹⁶

This distinction broadly maps onto the Western concept of counterforce in the sense that both refer to nuclear strikes on an adversary's nuclear weapons, but the focus is more at the level of grand strategy and on drawing a distinction between China and its enemies. Other works share this emphasis, arguing that China has a defensive strategy of retaliation while countries have an offensive nuclear strategy (进攻性核战略/jingongxing xing he zhanlüe) which relies on preemption.⁶⁹⁷ The thinking goes that China has a defensive foreign policy backed by a nuclear strategy of retaliation, while the United States has an aggressive foreign policy backed by an offensive, first-use nuclear strategy.

How Does China Understand Its Own Requirements?

Until recently, Westerners understood the PRC's nuclear strategy as one of minimum deterrence. While PRC writers favor other terms, such as “small but streamlined,” for many years, the PRC did not articulate a need to field a large nuclear arsenal with diverse attributes and military capabilities. Yet recent PLA writings have taken a more nuanced approach. For example, the 2020 PLA National Defense University version of Science of Military Strategy distinguishes between maximal, limited, and minimum forms of nuclear deterrence, and equates the first form with nuclear superiority based on “first large-scale” nuclear strikes for coercion.⁶⁹⁸ While the writers do not associate any specific approach with the PRC, the discussion makes clear the writers' sympathy for limited deterrence. However, the same writers do not link these approaches to targeting requirements. This is consistent with a longstanding difference in PRC nuclear thinking compared to their western counterparts. Western experts tend to equate a small arsenal with a countervalue approach to nuclear employment, but PRC thinkers have never equated “minimum” deterrence with the Western concept of countervalue targeting, even in the era of a “small but streamlined” arsenal.⁶⁹⁹

Instead, PLA writing on both nuclear and conventional weapons targeting focuses on holding at risk “key points” (重点), which in the nuclear context can refer to key

696 The literal translation of 后发制人 (houfazhiren) is more akin to “striking after a strike.” PLA Academy of Military Science (AMS), *Science of Military Strategy* (2013), p. 174.

697 PLA AMS, *Science of Military Strategy*, p. 175.

698 PLA National Defense University (NDU), *Science of Military Strategy* [CASI Translation] (2020), p. 128. A related concept is “decapitation” (斩首), which denotes strikes against command and control targets.

699 Hans M. Kristensen, Robert Norris, and Ivan Oelrich, *From Counterforce to Minimum Deterrence: A New Nuclear Policy Toward Eliminating Nuclear Weapons* (Washington, DC: Federation of American Scientists, 2009), p. 29.

point “counterstrikes” (重点反击/zhongdian fanji) or strikes on key objectives (重点目标, zhongdian mubiao). These key points include both counterforce and countervalue targets, such as “enemy command centers, communications hubs, transportation hubs, military bases, political centers, economic centers, important industrial bases, and other strategic and campaign targets.”⁷⁰⁰ These strikes, which would be undertaken in the context of retaliation to an adversary’s nuclear strike, could involve multiple waves and would require extensive operations in a nuclear environment. PLA strategists evidently do not see a meaningful distinction between nuclear force targets, targets critical to the conduct of a military campaign, targets supporting an overall war effort, or civilian economic and societal targets.

This approach differs from both U.S. and Russian thinking on nuclear targeting in two other important ways. Unlike the American tradition, PLA writers do not spend much time discussing the strategic stability, credibility, or ethical implications of different nuclear targeting approaches. In the U.S. debate, proponents of counterforce argue that it is a more credible and proportionate approach to nuclear employment, which makes it a more stabilizing and lawful policy. But opponents of counterforce argue the opposite—counterforce promotes arms racing, crisis instability, and requires maintaining large forces, which makes counterforce bad policy.⁷⁰¹ This debate is all but absent in the PRC, where such considerations appear irrelevant for a strategy that focuses on shocking the enemy

Unlike the Russian tradition, PRC military strategists have no concept of operational victory or nuclear warfighting to achieve purely military objectives. Instead, the purpose of nuclear employment is to compel the adversary to de-escalate. Nuclear strikes accomplish this goal by allowing the counter-attacker to seize the initiative and impose “huge losses for the enemy,” causing the enemy to be “shaken psychologically in order to weaken their will to wage war.”⁷⁰² PLA writers do not elaborate on whether this shock serves to terminate the nuclear phase of a conflict or terminate the war altogether. Nor do PLA writings distinguish between limited and large-scale attacks; rather, they distinguish between waves of “initial” and “follow-on” strikes.⁷⁰³

This relative lack of discernible “thinking about the unthinkable” stands in marked contrast to the extensive thinking about the escalation management implications of targeting in PLA writings on conventional weapons. PLA thinkers have thought extensively about how to use precision guided munitions and careful targeting for “war control,” which in the West denotes PLA ideas for managing escalation through reconnaissance, collateral damage, and controlling the geographic scope of a

700 PLA Second Artillery Corps, *Science of Second Artillery Campaigns* (Beijing: PLA Press, 2003), p. 240.

701 Kristensen, Norris, and Oelrich, p. 30.

702 PLA Second Artillery Corps, *Science of Second Artillery Campaigns*, p. 244.

703 Ibid., p. 246.

conflict.⁷⁰⁴ These concepts do not appear explicitly in PLA thinking on nuclear targeting even though they echo similar concepts in the U.S. debate on nuclear counterforce.

Established Ideas in an Evolving Context

Historically, PRC thinking on nuclear strategy has closely tracked developments in its own nuclear capabilities. Early in the PRC's nuclear history, nuclear thinking served a necessary function: to instruct a burgeoning officer corps. Later, nuclear thinking served as a tool of the Chinese Communist Party's assertive control over policy.⁷⁰⁵ Today, as the PRC's nuclear forces undergo unprecedented expansion and diversification, the role of the PLA's nuclear strategists appears in flux. Thus far, the PRC's nuclear force improvements are consistent with available PLA thinking on nuclear strategy because a more effective and larger (but not numerically superior) arsenal translates into greater survivability and options for de-escalation strikes.⁷⁰⁶ But outsiders can see that China's nuclear posture is changing and wonder whether China's nuclear thinking will keep pace.

The overwhelming determinant of a shift in approach is the views of the Chinese Communist Party, which dictates nuclear policy to the PLA. But PLA thinking and past practice suggest that, within the confines of what the Party permits, the PLA takes a pragmatic view in assessing new capabilities. For instance, in the 1990s, PLA strategists extensively debated whether advances in space and missile defense capabilities could improve escalation management after limited nuclear employment. While remaining skeptical about the feasibility of superiority given China's capabilities at the time, several writers saw significant value in a robust suite of nuclear options. Conversely, in the 1980s, the Party decided to forego development of an enhanced radiation weapon (a "neutron bomb") because of improved relations with the Soviet Union, a perceived calming of the superpower arms race, and technological challenges.⁷⁰⁷ In both cases, PRC leaders and PLA strategists weighed their technological, operational, and political options and decided based on the factors confronting them at the time. It is reasonable to expect that changes in the PRC's assessment of each of these factors could presage future shifts in published thinking.

Adding to the uncertainty surrounding the PRC's trajectory, many semi-authoritative sources on PRC nuclear strategy are over a decade old. For now, the insights in PLA writing correspond to official U.S. government assessments, such as those in the Department of Defense's annual report on Military and Security Developments Involving

704 Alison A. Kaufman and Daniel M. Hartnett, *Managing Conflict: Examining Recent PLA Writings on Escalation Control*, Center for Naval Analyses (2016), pp. 13-14. <https://www.cna.org/reports/2016/drm-2015-u-009963-final3.pdf>. Accessed July 5, 2024.

705 Taylor Frael, *Active Defense: China's Military Strategy Since 1949* (Princeton, NJ: Princeton University Press, 2019), p. 236.

706 Brian Radzinsky, "The Strategic Implications of the Evolving US-China Nuclear Balance," *The Washington Quarterly* 44, no. 4 (2021). <https://www.tandfonline.com/toc/rwaq20/44/4>. Accessed July 5, 2024.

707 Jonathan Ray, "Red China's 'Capitalist Bomb': Inside the Chinese Neutron Bomb Program," *China Strategic Perspectives* 8, Institute for National Strategic Studies, National Defense University (January 2015). <https://inss.ndu.edu/Media/News/Article/652871/red-chinas-capitalist-bomb-inside-the-chinese-neutron-bomb-program/>. Accessed July 5, 2024.

the People's Republic of China.⁷⁰⁸ As these sources age, however, it becomes harder and harder to claim that these sources represent current PRC and PLA thinking.

Conclusion

PRC strategists have adopted and refined many Western concepts on deterrence and military, but the distinction between counterforce and countervalue nuclear targeting is not one of them. Instead, PRC writers tend to conflate approaches to nuclear targeting with a state's nuclear employment strategy—whether a state strikes first or second and whether it seeks nuclear superiority or sufficiency. This approach serves a political purpose by enabling PLA writers to draw distinctions between China's approach to nuclear strategy (framed as purely defensive) and those of China's rivals, primarily the United States.

This approach is also consistent with PLA discussion on nuclear targeting, which does not distinguish between targeting conventional military forces, war-supporting industry, civilian targets, or nuclear forces. Instead, PLA strategists favor holding at risk “key points” to compel an adversary to cease its attack and de-escalate. These discussions articulate a wide range of target categories that could comprise a key point counterattack depending on the particular adversary, ranging from adversary nuclear weapons infrastructure to adversary industrial centers. This discussion implicitly parallels Western concepts of tailored deterrence. But it also demonstrates a relative disinterest in the moral or escalation implications of nuclear employment policy. However, the lack of official PRC or PLA discussion on nuclear targeting along with the closed nature of the PRC's policymaking system makes it difficult to draw definitive conclusions about how the PRC would actually employ nuclear weapons.

The inherent lack of transparency in the PRC's nuclear policy makes it hard to make sense of recent changes in the PRC's forces. These developments are consistent with PLA writings on nuclear strategy, especially a “limited” (vice “minimal”) approach to nuclear deterrence. However, continued growth, diversification, and improvement may make it harder for outside observers to tell whether the PRC is still committed to a retaliatory approach to nuclear strategy or whether it has embraced a different strategic concept. If these trends continue, however, Western audiences should be hesitant to assume the PRC is shifting to a counterforce strategy, because there is nothing in PRC writing or behavior to suggest a repudiation of “countervalue” targeting in the Western sense. The PLA will likely see continued value in both.

708 Office of the Secretary of Defense, *Military and Security Developments Involving the People's Republic of China*, Annual Report to Congress (2023). <https://media.defense.gov/2023/Oct/19/2003323409/-1/-1/1/2023-MILITARY-AND-SECURITY-DEVELOPMENTS-INVOLVING-THE-PEOPLES-REPUBLIC-OF-CHINA.PDF>. Accessed August 20, 2024.

Conclusions

Brad Roberts

Recall from the introduction that we had five main objectives in undertaking this work:

1. To bring some clarity to concepts and definitions
2. To bring some missing voices into the discussion
3. To contribute to the effort to reorient the counterforce debate away from its Cold War origins and into the new geopolitical context
4. To better understand the cases for and against counterforce
5. To better understand the reluctance of presidential administrations to take the steps advocated by counterforce critics

On Bringing Clarity and New Voices

With the hope of bringing some clarity to the concepts and definitions with which this debate is waged, we dedicated the opening three chapters to exploring different facets of the problem. Readers will judge for themselves our success in doing so.

With the hope of bringing some missing voices into the discussion, we recruited contributors widely. We found many practitioners with something to say. We also found some experts from allied countries with something to add, though not as many as we had hoped. We are particularly disappointed to have failed to generate essays from allies in the Indo-Pacific.

Reorienting Into the New Context

Our effort to reorient the counterforce debate away from its Cold War origins and into the new geopolitical context brought home the fact that the new context cannot be reduced to the China factor, even if China is the most salient new consideration with respect to nuclear targeting. An effective and credible deterrence strategy must address the full complexity of the new security environment. Key factors include the following:

- The deep aversion of leaders in Moscow, Beijing, Pyongyang, and Tehran to the global order they see as hegemonic and to the U.S.-backed regional orders which they neighbor, their evident preparations for conflict with the United States and its allies and partners, and what appears to be their growing confidence in accepting the risks of military confrontation.

- The erosion of deterrence as a result of developments in adversary capabilities and strategies in combination with the failure of the United States and its allies and partners to adapt to new challenges “at the speed of relevance” (to quote former Secretary of Defense James Mattis).
- China’s ongoing emergence as a nuclear near-peer to the United States as it grows and diversifies its nuclear arsenal.
- The related but separate problem posed by the need to deter and potentially defeat nuclear-backed aggression by two or more nuclear-armed rivals simultaneously.
- A Russian leadership group that has proven to be a much more challenging object of U.S. deterrence strategy than assumed for the three decades prior to 2022.
- The new ways of war of U.S. adversaries that emphasize nuclear-backed coercion, brinkmanship, and aggression against U.S. allies and partners and seem to reflect a judgment that regional nuclear wars can be won because they can be kept limited.
- The rising demands of vulnerable U.S. allies for strengthened security assurances and extended nuclear deterrence arrangements.

These factors suggest the following imperatives for U.S. nuclear strategy. It must account for:

- The adversarial quality of the new international order and thus for the possibility of complex, multi-actor contingencies involving cooperation and collusion among U.S. adversaries or just opportunistic aggression.
- The possibility that U.S. adversaries will cross the nuclear threshold with confidence that a limited nuclear war can be fought and won without a serious risk of escalating to large-scale nuclear exchanges.
- The challenges of arriving at and maintaining a balance of nuclear power in a multipolar context and thus also of avoiding unwelcome and dangerous new forms of military competition for strategic advantage.
- The dynamic adjustments Russia and China have made over the last two decades to their strategic postures at a time when very little has changed in the U.S. strategic posture.

- The rising challenges to credible extended deterrence and the associated growing assurance requirements of increasingly anxious allies in both Europe and the Indo-Pacific.

The Case Against Counterforce

Regarding our fourth objective, the starting point must be the case against counterforce as set out in the literature referenced in the introduction. Counterforce critics make the following main arguments. In so doing, for the most part they draw on the definition of counterforce that emphasizes nuclear attacks on the nuclear forces of the adversary.

First, counterforce strategy increases the risk of accidental nuclear war. As William Perry and James Cartwright put it: “The greatest danger is not a Russian surprise attack but a U.S. or Russian blunder—that we might accidentally stumble into a nuclear war.”⁷⁰⁹

Second, counterforce strategy increases the risk of intentional nuclear war. As James Acton puts it: “In a conventional conflict, Chinese or Russian fears that the United States might launch large-scale attacks on their nuclear forces could induce them to use their nuclear forces first, before those weapons were destroyed.”⁷¹⁰

Third, counterforce strategy increases the risk of a dangerous arms race. As Keir Lieber and Daryl Press put it: “in an era of rapid adversary nuclear enhancements, this ‘counterforce-only’ approach to nuclear planning is a recipe for large nuclear requirements and a likely three-party arms race.”⁷¹¹ As Charles Glaser, James Acton, and Steve Fetter put it, “Rather than enhancing the United States’ security, expanding U.S. nuclear forces in response to the challenge of two nuclear peers would likely decrease it....Both China and Russia could—and likely would—respond by expanding their nuclear forces...the result could be an arms competition that does not reach an equilibrium.”⁷¹²

Fourth, counterforce strategy cannot meaningfully limit the damage done by nuclear war. Damage limitation, argue Lieber and Press, is a “costly fiction.”⁷¹³ “In practice,” argue Glaser et al., “counterforce strikes would...lead to massive civilian casualties” among the enemy’s population, motivating a strong counterattack.⁷¹⁴ Further, as Glaser and Fetter argue:

709 William J. Perry and James E. Cartwright, “Spending Less on Nuclear Weapons Could Actually Make Us Safer,” *The Washington Post* (November 16, 2017).

710 James Acton, “Two Myths about Counterforce,” *War on the Rocks* (November 6, 2023).

711 Keir A. Lieber and Daryl G. Press, “U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity,” Issue Brief, Atlantic Council (April 2023).

712 Charles Glaser, James Acton, and Steve Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia,” p. 1.

713 Lieber and Press, “U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity.”

714 Glaser et al., “The U.S. Nuclear Arsenal Can Deter Both China and Russia.”

The United States currently possesses some capability to lower the costs of an all-out Chinese nuclear attack....Over the long term, however, China has excellent odds of prevailing in a contest between its retaliatory capabilities and the United States' damage limitation capabilities....Efforts by the United States to preserve its currently modest damage limitation capability are a doubly bad idea.⁷¹⁵

Fifth, limited nuclear war is a myth. After first nuclear use, escalation will be inevitable and uncontrollable. In the words of Perry and Collina: "There is every reason to believe that, once attacked with atomic weapons, a nation would be so enraged and/or would assume that a full attack was on the way that it would respond with everything they've got."⁷¹⁶

Sixth, counterforce is not essential to extended deterrence. As Glaser and Fetter put it, "the United States can meet its extended deterrence requirements without a damage-limitation capability."⁷¹⁷ However, they concede that "allies might not be confident that the U.S. extended deterrent is adequate."⁷¹⁸

Seventh, counterforce comes at a huge expense. The cost of maintaining the force is substantial and would grow even higher if the United States chooses to join an arms race with Russia or China or both. The biggest potential cost is in modernizing the ICBM leg of the program—which may be unnecessary if the United States were to drop counterforce. As Perry has argued, "ICBMs are not necessary anymore."⁷¹⁹

Eighth, counterforce strategy also imposes reputational costs. In the newly contested international nuclear order, the United States seeks to cast itself as a responsible stakeholder whose nuclear policies offer leadership by example in risk reduction. Some believe that those claims to leadership are undermined by a nuclear modernization program that they deem excessive and risk-generating.

Finally, counterforce strategy can be replaced by an alternate strategy that will be more effective and efficient. As James Acton has argued, "calling for an end to counterforce targeting requires articulating an alternative."⁷²⁰ Acton sets out an approach built on putting at risk conventional military forces and war-supporting industry.⁷²¹ Lieber and Press argue that "the best, simplest, and least destabilizing way to deter massive counter-city strikes on the U.S. homeland by a leading nuclear

715 Charles L. Glaser and Steve Fetter, "Should the United States Reject MAD? Damage Limitation and U.S. Nuclear Strategy Toward China," *International Security* 41, no. 1 (Summer 2016), pp. 49-98.

716 William J. Perry and Tom Z. Collina, *The Button: The New Nuclear Arms Race and Presidential Power from Truman to Trump* (Dallas, TX: BenBella Books, 2020), p. 100.

717 Glaser and Fetter, "Should the United States Reject MAD?" p. 90.

718 Ibid.

719 William J. Perry, "Why It's Safe to Scrap America's ICBMs," *The New York Times* (September 30, 2016).

720 Acton, "Two Myths about Counterforce."

721 Ibid.

power is to threaten retaliation in kind.”⁷²² Perry and Collina call for a force designed only for second-strike retaliation.⁷²³ The case for the viability of each alternative is made in various strategic, military, political, economic, and moral terms.

In sum, counterforce opponents judge there to be many costs and risks in the existing approach to nuclear deterrence and few or no benefits. They judge further that the existing approach has “severe failings” in the new tripolar context. These include the likelihood of “an unnecessary and futile arms race” that would “increase the probability of nuclear war.”⁷²⁴ Thus, they conclude that abandoning the strategy “will enable the United States to avoid overreacting to the arrival of China as a second nuclear peer.”⁷²⁵

The Case for Counterforce

The case for counterforce rests on the following main arguments (largely drawn from this collection of essays). For the most part, these arguments draw on a broad definition of counterforce encompassing both nuclear and non-nuclear attacks on adversary nuclear and other strategic assets.

First, the primary nuclear risk in today’s security environment is an adversary’s purposeful use of nuclear weapons. The source of this risk is their new strategies that seek to coerce the United States and its allies and partners with nuclear brinkmanship and limited escalation to demonstrate resolve. This judgment is in opposition to the view that the greatest nuclear danger today is inadvertent or accidental escalation.

Second, counterforce capabilities may help to keep a limited war limited. In regional wars against nuclear peers, U.S. counterforce capabilities help to limit the risks of nuclear escalation by enabling reciprocal responses to limited attacks and by exposing the attacker to the risk of a large-scale preemptive counterforce strike. This strengthens deterrence in various ways. The threat to respond proportionately ought to be more credible to an adversary than the threat to respond with a large-scale response with strategic systems. In wars against a regional challenger like North Korea armed with modest long-range nuclear capabilities, U.S. counterforce capabilities lend credibility to the threat that a North Korean nuclear attack “will be met with a swift, overwhelming and decisive response” resulting “in the end of the Kim regime.” Clearly, this judgment is in opposition to the view that “limited war is a myth.”⁷²⁶

722 Lieber and Press, “U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity.”

723 Perry and Collina, *The Button*, part II.

724 Charles L. Glaser, James M. Acton, and Steve Fetter, “The U.S. Nuclear Arsenal Can Deter Both China and Russia, Why America Doesn’t Need More Missiles,” *Foreign Affairs* (October 5, 2023), pp. 6, 24.

725 Ibid., p. 18.

726 Perry and Collina, p. 100.

The third benefit is a corollary to the second: what's good for keeping limited wars limited is good for extended deterrence. The U.S. ability for limited counterforce attacks lends credibility to U.S. threats to respond proportionately. This strengthens both deterrence of adversaries and assurance of allies. This benefit is particularly valuable in the contemporary context in which credible extended nuclear deterrence is in rising demand and as concern grows about a potential nuclear tipping point and proliferation cascade among U.S. allies and partners. Clearly, this judgment is in opposition to the view that CF is not necessary for extended deterrence.⁷²⁷

Fourth, for the most extreme circumstance involving large-scale nuclear exchanges with a nuclear peer, counterforce attacks by the United States on enemy forces held in reserve would reduce the damage inflicted on the United States and its allies. To be sure, they would not eliminate such damage. But the lives saved could measure in the many millions. As others observe, these damage limiting strikes cannot be accomplished on the needed scale and speed with conventional weapons alone. Clearly, this judgment is in opposition to the view that damage limitation is a "fiction."⁷²⁸

Fifth, the risk that limited counterforce strikes would incentivize escalation rather than de-escalation is real but must be weighed against the risks of trying to manage a regional nuclear crisis without such capabilities. Threats to respond to limited attack with a large-scale strategic attack or with a strike on population centers might be dismissed by adversaries as not credible. Threats to respond with non-nuclear counterforce strikes might also be dismissed as too slow and uncertain to be decisive.

Sixth, the risk of an arms race is also real but must be weighed against the increased risks of appeasement and war if the United States were to allow a stable balance of power to erode into an unstable balance providing strategic advantage to its adversaries. Moreover, the problem faced by the United States today is not the problem of intensifying racing; rather, it is the problem of being in a very non-competitive position at a time when U.S. adversaries are in very competitive positions.

Seventh, the existence of a large force of ICBMs deep in the American heartland raises the bar for those who might contemplate a preemptive nuclear attack on the United States. To eliminate a large enemy nuclear force requires a large force. Those with only a small force must reckon with the certainty of an American reply. Those with a large force must reckon that a large attack into the American heartland would leave an American president no choice but to retaliate in whatever means possible. Both

727 Charles L. Glaser and Steve Fetter, "Should the United States Reject MAD? Damage Limitation and U.S. Nuclear Strategy Toward China," *International Security* 41, no. 1 (Summer 2016), p. 90.

728 Keir A. Lieber and Daryl G. Press, "U.S. Strategy and Force Posture for an Era of Nuclear Tripolarity," Issue Brief, Atlantic Council (April 2023).

reckonings reinforce deterrence. Clearly, this judgment is in direct opposition to the view that “ICBMs are not necessary anymore.”⁷²⁹

Eighth, retaining a modern Triad ensures flexibility for unanticipated contingencies. This flexibility has always been of strategic value but is even more so in today’s complex multipolar security environment. It aligns well with the growing focus on hedging effectively against future surprise, whether technical, geopolitical, operational, or programmatic.

Ninth, the fiscal costs of maintaining a counterforce posture are high in absolute terms but manageable in relative terms. Operating and modernizing the nuclear deterrent requires about seven percent of the defense budget, of which only a portion goes to the ICBM force.

Tenth, the reputational costs cited by counterforce opponents are not severe; the United States still has a good story to tell about its role as a responsible nuclear weapon state. There is also some skepticism about how much strategic value actually accrues to the United States, in the form of military restraint by others, from its attempts to lead by example with unilateral strategic restraint of various kinds.

Finally, the alternatives to counterforce are all unattractive for various legal, moral, and other reasons. Moreover, it is highly debatable whether public support for nuclear deterrence can be maintained if leaders repudiate the moral and legal foundations of nuclear strategy.⁷³⁰

In sum, the case for counterforce rests on judgments that it reduces the risks of war and of escalation if war occurs. In that sense, it contributes to strategic stability. Diluting or eliminating it would heighten risk and weaken the assurance of allies. U.S. forces can and should be tailored to ensure that U.S. nuclear strategy remains credible and effective in the emerging, more multipolar nuclear environment.

The construction of the two cases for and against counterforce implies that there are two clear camps. This is an oversimplification. To be sure, the expert community is deeply divided on core judgments about, for example, the possibility that nuclear conflicts might remain limited, the feasibility of damage limitation, and the risks of arms racing. But perspectives are not monolithic and a diversity of views is evident on both “sides.”

U.S. Leadership Reluctance to Abandon Counterforce

Our final objective was to better understand the reluctance of policymakers in multiple presidential administrations to take the steps advocated by counterforce critics. Perry and Collina attribute the failure of the Obama administration to make the necessary changes to “a built-in body of opposition in the military,” a “nuclear bureaucracy that...will keep the contracts and the money moving,” and “the wrong

729 Perry, “Why It’s Safe to Scrap America’s ICBMs.”

730 Keith B. Payne, “The Rejection of Intentional Population Targeting for ‘Tripolar’ Deterrence,” National Institute for Public Policy, Occasional Paper 3, no. 9 (September 2023).

staff.”⁷³¹ This conveys no grasp of that administration’s long deliberation on these matters.

An alternative hypothesis is that such matters have not been considered at the leadership level. The available historical record is unclear about the extent to which this may be so. After all, nuclear employment guidance is a matter of great secrecy and thus too leadership debates about its scope and contents. But recent administrations have conducted enough of a review to include continued support for counterforce in unclassified reports to Congress. For example, after a year-long review of employment strategy, the Obama administration reported in 2013 that “the new guidance requires the United States to maintain significant counterforce capabilities against potential adversaries. The new guidance does not rely on a ‘countervalue’ or ‘minimum deterrence’ strategy.”⁷³²

A better hypothesis is that the case against counterforce is simply less compelling than the case for counterforce to leaders charged with the responsibility to protect the United States and its allies and partners. In my assessment, this is especially so in present circumstances. It seems unwise to reduce or abandon the means to prevent or respond to limited nuclear war at a time of heightened risk of such war. It seems unwise to accept new risk in extended deterrence at a time of new nuclear threats to U.S.-backed regional security orders. It seems unwise to further erode the assurance of allies at a time when they have many other reasons to worry. It seems unwise to accept new nuclear risks in the hope of avoiding new forms of strategic competition that have, in fact, been underway for some time. It also seems unwise to limit the president’s flexibility in meeting the demands of complex, multi-actor contingencies. This is not to argue that counterforce is without costs and risks. But they are modest relative to the benefits. They are also modest compared to the costs and risks of abandoning counterforce.

Toward Robust Dialogue

We are left with a final question about the nature of the dialogue needed by policymakers. One version of dialogue entails a direct clash between opposing views. A debate over those core judgments where the Community of Interest is deeply divided seems likely to produce a lot of heat but little light and to reinforce political paralysis. A more promising dialogue would focus on a net assessment of the benefits, costs, and risks of different approaches. This would help to illuminate key policy choices more clearly. But this requires setting aside treasured convictions that one side or the other has all the right answers. It also requires moving on from an abstract debate to a debate informed by the current context. We hope this volume contributes something useful toward these ends.

⁷³¹ Perry and Collina, *The Button*, pp. 202-203.

⁷³² *Report on Nuclear Employment Strategy of the United States* (June 12, 2013).

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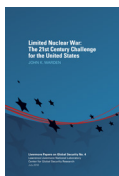
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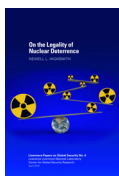
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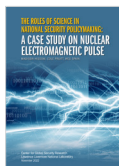
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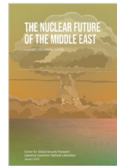
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